T. Heard Esq

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PRICE ONE SHILLING.

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CONTENTS.

PHILO-SOCRATES.

AMONG THE BOYS.

ON LABOUR-SELLING.

P. Supposing that you had never had any thoughts about the subjects on which we have conversed, previous to my coming among you, I think you will agree with me that you assemble here to-day in a state of mind much better prepared to consider questions bearing upon your future well-being than that in which you came to our first meeting. Even with the thoughts that you did bring, and which you could hardly have failed to bring, you must be sensible of the correction, modification, improved arrangement, and confirmation which, as the occasion required, they have undergone, fitting them to serve you in better and readier guidance when summoned, as you soon will be, to judge and act for yourselves. You form a portion of the children belonging to a population of twenty millions in Great Britain. What is it, may we say, that has enabled you and others of your age to live as comfortably as you hitherto have lived?

B. The care and affection of our parents, and, in the case of children who have been deprived of their parents, the care of kinsfolk and friends, or of guardians appointed by law to supply their place as far as possible.

P. What is it that enables parents and guardians of children to support so many more children than could have been maintained in existence less even than fifty years ago?

B. The larger store of wealth which they have found ready to their hands than ever was to be had in former days.

P. What have your parents and guardians, and the parents and guardians of most other children, been doing while providing for your keep and education?

B. They have, by their work, been obtaining a title to participate in the store of wealth on which the existence of the whole community depends.

P. On what condition has this participation been conceded to them?

B. That they should work in such a way as that their labour would be expected to more than replace at a future time the portion of wealth given up to them.

P. Has the portion of wealth given up to them been so much capital consumed?

B. We hope not. It was so much capital transferred to them—placed at their disposal by the employers for whom they worked. But any part that they chose to save and employ, or lend to others to employ, became their capital.

P. In a few years most of you boys will be quitting school, will be looking out to provide for yourselves; which is the wiser course, to begin to think when the time for action arrives, or some time beforehand, what you will have to do?

B. Beforehand, as we hope we are now doing.

P. What do you expect your first step will be?

B. To get work—to find a master who will employ us or take us into his service.

P. As the industrial world is in perpetual movement, the elders departing, and improved methods of conducting work

being of frequent occurrence, room is sure to be found for the properly qualified young who are coming forward, especially in a state of society like ours, with a capital steadily on the increase. But the situations to be filled are of very different kinds. You, or your parents for you, must pay to be apprenticed to some; in some, you must work for nothing at first; and in others wages will be given to you at once. Which should you prefer?

B. We should like to earn wages at once—at all events, as soon as possible.

P. If you meet with a master willing to take you into his service, what shall you expect to receive from him?

B. Wages. We shall sell labour for wages.

P. Are you quite sure that labour-selling is a good practice?

B. Good or bad, we see no escape from it. If property is to be respected, labour-selling is the only resource available to a large portion of society for obtaining participation in wealth.

P. We have already agreed that labour is unavoidable, unless man is to be indifferent about existence and well-being; and we have seen that labour may be made pleasurable, and by what means. Labour-selling, also, seems unavoidable. But the process may give rise to varieties of conduct—some good, and some bad; the latter of which you would like to avoid. How are you to become qualified as future labour-sellers to distinguish between wise and unwise attempts to dispose of your labour?

B. By learning beforehand how we ought to set about selling our labour, what wages we may reasonably hope for, what it may be judicious to submit to for a time, and what we ought to be prepared to go without permanently.

P. When parents and guardians have the means, why do they sometimes select situations for the young under their charge for which they have to pay, or in which wages are only forthcoming after a time?

B. Because they expect that the young persons appointed to them will have an opportunity of acquiring some aptitude and skill through which they will eventually earn higher wages.

P. Fathers who are themselves skilful workmen, or who are managing a business of their own, but cannot afford to pay a premium for placing their children out, can they do anything else to assist their children to wages somewhat above the lowest grade?

B. They may allow their children to practise and learn under themselves.

P. Is it a great advantage to children to enter upon their industrial career with such assistance from their parents?

B. Yes, for longer time is allowed them to gain strength, experience and aptitude, before they are thrown entirely on their own resources.

P. Is there any danger to be apprehended arising out of the very help thus afforded to the young?

B. They may, if not previously well taught and trained, be led to use such advantage as a substitute for good qualities to be strengthened and confirmed by continued self-discipline, instead of as an assistance to their good qualities, causing them to yield fruit earlier and more abundantly.

P. Is there any compensation occasionally to those whose hard lot it seems to be sent forth young and unassisted to climb the first steep and rugged steps that lead to industrial success?

B. If it has been their good fortune to learn, as we are doing, how to read the book of life, and to realize the thought of what their own self-discipline may accomplish, the sense of how entirely they have to rely upon themselves may stimulate them to such exertion, fortitude, and determination, as will enable them to conquer all difficulties, and to become, in their triumph, better, and wiser, and happier men.

P. With exceptions, rare enough to warrant our passing them over here, we may say that all the young, some a little

earlier, some a little later, have to procure by their own labour the wealth required for their livelihood. They all, at first, look to the receipt of wages; most of them continue to work for wages throughout their industrial career; while but few comparatively branch off to be buyers of labour, partly with their own capitals, partly with capital trusted to them by others. What is it that you are desirous of learning now before you take your labour to market?

B. We should be glad to learn how we may hope to get good wages, and how to turn them to the best account after we have got them.

P. Let us have a correct representation of your position at starting in life on your own foundation. You wish to obtain wages. To whom do you apply?

B. To those who wish to purchase labour, who have capital of their own, or who are trusted with capital by others.

P. Out of what fund are your wages to be paid?

B. Out of capital.

P. Is there no other fund out of which wages can be paid?

B. We were about to say no other; but it occurs to us that the wages of domestic servants, and, perhaps, of some others, would scarcely be said to be paid out of capital.

P. If they are not paid out of capital, out of what fund are they paid?

B. They must be paid out of the store of wealth, of which capital forms a part.

P. Waiting to settle some of the distinctions which ought to be drawn between payments to some receivers of wages and payments to others, what may we say of them all?

B. That all wages are paid out of the existing store of wealth; and most of them out of that portion of the store which we call capital.

P. When an employer or a highly-gifted labourer pays wages to domestic servants, whose labour sets him free to

earn much more than he pays in wages, does he not appear to act like a capitalist who uses wealth to produce more wealth, at the same time that he is obtaining comfort for himself and his family?

B. He does; and, so far, seems to pay wages out of capital.

P. We will not attempt to fix just now out of what parts of the store of wealth the wages of domestic servants and others are paid. It will suffice for the present to recognize that they are paid out of the store of which capital is a part. But tell me—Is the whole of capital applicable to the payment of wages?

B. No; there is a very large portion consisting of machinery, buildings, tools, &c., which may be called instruments of production, without which, the other portions would, in some cases, be able to produce nothing; and in other cases, to produce much less than they do now.

P. May we separate capital into two great divisions?

B. Yes, into instruments of production and into the wages-fund.

P. What is the leading thought—the principal object of those who are engaged as directors or administrators of this capital?

B. How to obtain as much profit as possible.

P. What determines their turning their thoughts to altering, improving, and increasing the instruments of production, rather than to increasing the wages-fund?

B. The expectation of gaining larger profit, although, perhaps, at a later period.

P. What determines their striving at as early an addition to the wages-fund as possible?

B. The conviction that they can earn more profit by directing the labourers, whom they employ, to work with such instruments of production as they have, than in directing them to produce more and better instruments.

P. What tends to retard or to stop increase of capital, whether increase of instruments or increase of wages-fund?

B. Difficulty or impossibility of obtaining as much, or larger profit, or any profit at all.

P. Do all the same impediments to increase of capital, which existed in former days, continue now?

B. No. If they had not been removed, our capital would not have been increased and improved up to its present state of efficiency, and the wages-fund would be incapable of maintaining our present number of labourers.

P. And are all the difficulties, which still obstruct us, likely to remain irremoveable?

B. The improvements and discoveries of late years, and the spirit of inquiry and experiment abroad, prevent our despairing of further progress.

P. Do all the applications of capital to new contrivances and discoveries result in increase of profit, and eventually in increase of capital?

B. No; but although the instances of failure are numerous, and loss of capital the consequence, falling severely upon individuals, they are scarcely traceable in the midst of the prodigious increase resulting from those new applications of science which are successful.

P. Whose province is it, and ought it to be, to administer capital, and to determine in which way it should be applied for the purpose of increasing our store of wealth, whether directly or through the intermediate preparation of improved instruments of production?

B. Of the persons who, being possessed of capital, feel confidence in their own capacity to employ it advantageously, and inspire other capitalists with the confidence to trust them.

P. Who are the applicants for wages out of the wages-fund?

B. First, all those labourers who, having previously engaged themselves, wish to continue their engagements, whether because they have no capital of their own, or because they prefer to lend their own capital and to work under the

direction of those who have the command of large establishments and the most perfect instruments of production; and secondly, the young who are continually coming forward, year by year, and day by day, in search of masters prepared to buy their labour and to give them an opportunity of acquiring industrial capacity.

P. Before we examine the distribution by the administrators of capital of this wages-fund among the labourers who resort to it for wages, let us survey it as a whole, and endeavour to ascertain what it is, and what it is not competent to do. Have you formed any opinions upon this subject? Is it always possible for the administrators of the wages-fund to provide out of it what, for want of a better expression, I will call satisfactory wages for all?

B. This wages-fund might be large, or moderate, or small, compared with the whole number of labourers. If it were large, all labourers might be in receipt of handsome wages, and if it were moderate, of sufficient wages. But if it were small, the wages of some must be inadequate.

P. You speak hesitatingly—you say that if the wages-fund were large, all labourers "might be" in receipt of handsome wages; why do you not say "must be?"

B. Because, if the wages-fund were large, it might happen, nevertheless, since some labourers receive much larger wages than others, that some would still receive inadequate wages. If the wages-fund were moderate, some must be in receipt of inadequate wages, unless all were paid alike. But when the wages-fund is small, all might, and some must, be in receipt of inadequate wages.

P. You do not convey to me very distinctly whether you feel convinced that a wages-fund might be large enough to provide adequate wages for all.

B. We see no reason why it might not be. But whether all labourers would actually receive such wages must depend upon the presumed producing powers of the labourers. However large the wages-fund, the title to wages of each labourer

is the estimate formed of his producing power by some employer. While a capable labourer might receive handsome wages out of a small wages-fund, an incapable labourer might be on the brink of starvation with a larger wages-fund.

P. Is the magnitude of the wages-fund, as compared with the number of labourers, a subject that has been, still is, and ever will be likely to occupy men's thoughts?

B. It cannot be otherwise; for unless the wages-fund be large compared with the number of labourers, misery must prevail.

P. To assist their meditations and intercommunications upon a subject felt to be of such vital importance, they have resorted to a supposition that capitalists, instead of dealing out the wages-fund as they do, giving very different wages to different kinds of labourers, distributed this fund in equal shares among all the labourers. Do you know what name has been given to wages imagined to be thus distributed?

B. Average wages.

P. Arithmetical language has sometimes been used to explain what is meant by "average wages." If the wages-fund is represented as the dividend, and the number of labourers as the divisor, what will average wages be?

B. The quotient.

P. Restricting your thoughts to average wages, may you drop the conditional, and give a positive expression to your judgments?

B. We can say that when the wages-fund is large compared with the number of labourers, average wages must be large; when it is moderate, average wages must be adequate; and when it is small, average wages must be inadequate.

P. When a people is suffering from inadequate average wages, from what quarter is relief to be expected?

B. It can be reasonably expected only from an increase of the wages-fund.

P. And how is that to be brought about?

B. By producing and saving more; the results from which efforts, let them be made ever so energetically, can only be realized at a future time, and gradually.

P. Because average wages cannot be brought up from an unsatisfactory to a satisfactory state, except by slow degrees, ought discouragement to be felt, or exertion to be relaxed?

B. Exertions ought rather to be quickened, so that the good times may not be further put off. Besides, while the increase of the wages-fund is progressing, wages will steadily become less and less unsatisfactory, as we cannot say more and more satisfactory.

P. Let us now look a little into the bargains which are actually being made between employers and labourers. What is the thought generally uppermost among employers in hiring labourers?

B. To obtain the best services, or the greatest producing power, for the wages which they pay, or to look about to find the labourers who, with equal producing powers, will serve for the smallest wages.

P. And what is the thought uppermost among the labourers in seeking employment?

B. To find the masters who will give them the largest wages for the work which they are disposed to do.

P. What will be the effect upon average wages of these exertions, of employers to give the smallest wages in proportion to the work to be done, and of labourers to obtain the highest wages for their work?

B. None at all, for the time being, since the wages-fund is neither increased nor diminished by this bargaining on either side. When the employer succeeds in hiring on low terms, he applies the capital which he thus retains in hiring other labourers, or in lending it to other capitalists. And when the labourer prevails in securing a large wage, he leaves so much less capital to be employed upon other labourers.

P. If the wages of some be increased, will the wages of others be diminished?

B. This consequence can be prevented only by the receiver of the increased wages saving instead of consuming the increased wages to which he has become entitled, in other words, by making capital out of them.

P. Do you mean that, so far as labourers refrain from consuming the wages paid to them, capital is merely transferred from one set of hands to another?

B. Exactly; and if the capitalists who paid away the wages have directed judiciously the labour which they purchased, when their capital is returned to them with profit, society will benefit, and the future wages-fund will be increased from two sources.

P. Does it make a great difference, as regards the wages-fund, whether the wages be paid to economical or spendthrift labourers?

B. In one case the capital is consumed less profitably than it is in the other; every saving of wages is so much capital spared to do its work over again.

P. Does this consideration weigh much with employers in distributing the wages-fund?

B. No. What weighs with them is their estimate of the work likely to be done, or of the wealth likely to be produced by the labourers who offer their services.

P. Surely this consideration is so important that it ought to have weight with somebody. With whom does it weigh?

B. It weighs with all intelligent and well-conducted labourers; and it ought to be the special care of each generation that the young who are to succeed them shall be gifted with the intelligence and habits to enable them to attach the weight to it which it deserves.

P. Using money, for the present, merely as the readiest means of measuring the relative producing powers of different bodies of labourers, if a capitalist had a certain quantity of work to be done, and two bodies of men offered to undertake it, each judged by him to be capable of executing the work, which would he employ?

B. The one which offered to do the work for the smallest pay.

P. If one offered to do the work for 900*l.*, while the other asked 1,000*l.*, would he employ the former?

B. Yes, that is what we mean.

P. If the body which offered to do the work for 900*l.* consisted of ten men, while that which offered to do it for 1,000*l.* consisted of twenty, would he prefer engaging ten men at 9*l.* each, to engaging twenty men at 5*l.* each?

B. He would, provided he believed the ten men at 9*l.* each to be capable of doing his work as well and as quickly as the twenty men at 5*l.* each.

P. Or if two bodies of men offered to do the same work for him at the rate of 20*l.* per week—one of ten, the other of twenty men—but he thought that the ten men would do the work better and sooner than the twenty, which would he prefer:—to give 2*l.* a week to each of the ten, or 1*l.* a week to each of the twenty men?

B. 2*l.* a week to each of the ten.

P. If, having fifty men employed on a piece of work, at the rate of 1*l.* a week each, and wishing to have the work completed in half the time, he found he could accomplish his purpose as readily by engaging a superintendent and two foremen at 30*l.* a week to organize the work and direct the other labourers, as by hiring fifty more labourers at 50*l.* a week, which course would he be likely to adopt?

B. To engage the superintendent and two foremen at 30*l.* a week.

P. How may we describe the object towards which the efforts of employers in distributing their wages-fund are constantly tending?

B. To obtain the largest results in the shape of work done, whether that be wealth or service, in proportion to the wages paid.

P. Which affords to an employer the readier means of

estimating the worth of his workman, payment by the piece or by the day?

B. Payment by the piece; and it is very commonly resorted to. But a capable and vigilant employer soon finds out which among his labourers paid by the day give him most work in return for his wages.

P. With employers thus intent upon obtaining as much work as possible for the wages which they disburse, or, putting it in the less pleasing form, intent upon giving as little wages as possible for the work to be done, which labourers will get the larger wages?

B. Those who do the better service.

P. In order to form an accurate judgment of the influence upon labourers of this state of mind among employers, let us take any number of labourers, equal in all respects except one, and so ascertain what the effect will be of that one difference. Say, to begin, some of them are drunken, others sober: which would receive the larger amount of wages in the course of the year?

B. The sober; because the drunken would be able to do no work while under the influence of liquor, and would be a hindrance to their fellow-workmen if absent from inability to work when their co-operation was counted upon, or if unfit to be trusted, although present at their work.

P. Suppose the drunken men were in a state of disability fifty out of three hundred working days, say, one-sixth of their time for work, do you think that their earnings would be no more than five-sixths of those of the sober?

B. Most likely less, on account of the annoyance, disturbance, and inconvenience arising from the impossibility of depending upon them at the very time that their co-operation could least be spared.

P. Some are lazy, others industrious: which would receive the larger amount of wages?

B. The industrious; because, if working by the piece, the industrious would complete the larger quantity of work, and

if by the day, vigilant employers would soon discover, granting that the idle came to their work regularly, who deserved most pay, whom they would like to retain in their service, and whom they would gladly be quit of, except at greatly reduced wages.

P. Some are dishonest, and others honest: which would receive the larger amount of wages?

B. The honest; because the dishonest workman cannot be trusted with anything that he might purloin, nor be relied upon to persevere faithfully with his work when his master's eye ceased to be upon him.

P. Some are ignorant and unskilful, others intelligent and expert: which would receive the larger wages?

B. The intelligent and expert; since there are few kinds of work on which men can be engaged, where ignorance and unskilfulness do not cause time which has been paid for to run to waste and material to be spoiled, if they escape committing greater mischief.

P. It happens that one bad quality seldom fastens upon a man without bringing others with it. The indolent man is likely to be ignorant and unskilful, to find his labour worth but little wages, and his wealth out of all proportion to his wants. Hence come temptations to drink with companions like himself, and, perhaps, to appropriate what belongs to others. What wages would be obtainable by workmen who were looked upon by the employers to whom they applied, as idle, ignorant, unskilful, drunken, and dishonest?

B. None at all.

P. How could such men be saved from starvation?

B. Not by wages. They could not replace capital with increase while consuming the smallest wages. Employers would not have them in their service were they even to offer to work without wages. Other workmen would not associate with them.

P. We will consider by and by what can be done with such miserable and degraded beings. Of men who can

persuade employers to give them wages, which will obtain the highest wages?

B. Those who, it is thought, will be able to produce the most—those who are in possession of the largest number of good qualities.

P. And who will be obliged to put up with the lower wages?

B. Those who can produce the least—those who have the fewest good qualities, or whose good qualities are damaged by their admixture with bad ones.

P. May the truly superior workman feel secure of being always able to obtain wages in proportion to the quantity and quality of his work, seeing that employers keep on the look-out to obtain services at as moderate a rate of wages as possible?

B. Yes; provided he take the same pains in selling his labour, that employers take in buying labour. Capitalists are quite as dependent upon labour for profit, as labourers are upon capital for wages.

P. What is meant, then, when we are told of employers who grind their workmen down to the lowest possible wages?

B. It is probably meant that they really do so; but the people who bring the charge may be mistaken. There are ill-judging and ill-conducted employers as well as ill-judging and ill-conducted workmen. Workmen, however, who know the worth of their labour, will not consent to be ground down.

P. Can they always help themselves?

B. As soon as they find a favourable opportunity, they quit their employer for another more able or more willing to appreciate their services.

P. If you were to hear of a number of workmen complaining of their employers, on which side would you expect to find the cause for complaint?

B. Possibly on both sides. But if the complaints were to be of long continuance, we could not but suspect that the

workmen were prevented from bettering themselves by some shortcomings on their own part. Superior workmen, ill-rewarded for their labour, would be on the look-out for less objectionable service, and not long in obtaining it; while the inferior workmen, who were really suffering from their own deficiencies, would be disposed to overlook them, and to attribute their unsatisfactory position to their masters.

P. And if the complaints emanated from the employers?

B. With similar reservations, we should suspect something wrong with them which prevented their engaging new and better workmen, instead of uttering vain complaints against workmen whom they retain in their service.

P. Will the hard task-master lose all his best workmen by attempts to under-pay and ill-treat them?

B. This would seem likely to be his lot.

P. Will workmen seek and accept service as readily with one employer as with another?

B. No. They will, of course, be on the look-out for good wages; but, besides, they will be more disposed to serve some masters at reduced wages, than others even at advanced wages.

P. Where an employer has a character for treating his workmen kindly and paying them well, by what kind of workmen is he most likely to be served?

B. By good workmen.

P. If the best masters find themselves served by the best workmen, what masters will be left for the inferior workmen?

B. We see: the masters who not only pay lower wages, but who are less kindly disposed towards their workmen.

P. Inferior workmen being repelled from superior employers, and inferior employers being avoided by superior workmen, shall we say that the inferior workmen and inferior employers are attracted to each other?

B. Rather that they are forced upon each other.

P. When ill-conducted workmen are compelled to serve

ill-conducted employers, what treatment ought they to be prepared for?

B. Harshness and small wages in return for small produce from their own labour and disregard of their employers' interest.

P. Where ought each party to seek for relief?

B. In self-correction—in the removal of that which keeps the well-conducted from contracting engagements with them. Whereas the ill-conducted employers complain of the badness of their workmen, and the ill-conducted workmen of the grinding harshness of their masters.

P. Should we be warranted in affirming that grinding, greedy masters cannot succeed in beating down the wages of their workmen?

B. Possibly not. We can hardly doubt that they do succeed, at times.

P. Should we be warranted in affirming that all masters, if so disposed, could not succeed in beating down the wages of all their workmen?

B. We should be warranted in affirming that; for the surplus capital which, by the supposition, must remain to be employed after the successful beating down the wages of all workmen, could only he made productive by paying more wages, that is, by raising wages.

P. Is the depressing of wages out of the power—beyond the reach of employers, let their grinding greediness be ever so great?

B. So long as the wages-fund is not reduced, masters cannot reduce average wages; and that fund is more likely to be reduced by wastefulness than greediness, by misdirection and carelessness than by grinding.

P. But did you not lean to the belief that grinding, greedy employers do at times succeed in reducing the wages of their workpeople?

B. We should have been nearer the mark, had we accounted for the low wages which prevail with such employers,

by the inferiority of the workmen who put up with their inferior pay. These employers don't lower wages, for the very greediness with which they are charged leads them to employ the whole of the wages-fund at their disposal. They merely, as a consequence of their blindness, exclude themselves from superior workmen, and in paying low wages probably pay wages larger in proportion to the services rendered, than the good wages paid by more judicious and more kindly disposed employers.

P. Have all employers equally pleasant work to offer to the workmen who are seeking employment?

B. No. Some work is more dirty, more unhealthy, more exhausting, more dangerous than another.

P. Does this make any difference in the wages that can be earned?

B. Yes. Higher wages are required to attract workmen to the more disagreeable work, unless their unfitness for other employment drive them to the work which better workmen avoid.

P. If fewer qualified workmen than were urgently sought for offered their services to employers who could only employ men of a high order of intelligence and conduct, how might employers hope to get more and retain those whom they had?

B. By giving such wages as will call forth and raise up the right kind of men for them, and will prevent those already in their service from being attracted away.

P. If more men were shut out from employments which, while agreeable, required a high order of attainments, than could be readily paid wages out of the capital embarked in more dangerous, unwholesome, and disagreeable works, what would happen?

B. They would press their services on employers at wages reduced enough to admit of their being paid out of the capital dedicated to these works.

P. Let us now put together the facts in conjunction

with the motives influencing employers and labourers in their engagements with each other, which serve to determine the prevailing rates of wages. First, as a matter of fact, do administrators of capital distribute the wages-fund in equal portions among all the labourers who apply to them?

B. No. They give large wages to some, smaller to others, and to some none at all.

P. Why do administrators of capital give the enormous wages which we know they do to some labourers?

B. First, because they expect to realize a profit from their work; and, second, because they cannot obtain and retain their services at lower wages.

P. What enables these highly-paid labourers to obtain such large wages?

B. First, their well-known producing powers as labourers, or the number of excellent qualities in combination which they possess; second, the readiness of other administrators to give them as much; and third, the alternative to which they can resort of working under their own capitals, with or without the aid of other capital obtainable on loan.

P. What compels some labourers to submit to the low wages which it is admitted are insufficient to maintain them in comfort?

B. The impossibility, under which they suffer, of persuading administrators of capital that their labour is worth purchasing at a higher rate.

P. Do we not sometimes hear it suggested that capitalists ought to pay larger wages to their workpeople?

B. Yes; and that too by capitalists who, ignoring their position as capitalists because they enjoy the income obtainable from it by allowing it to be administered by others, take care to exact full compensation from those to whom they trust the use of it. But you are assisting us to learn what capitalists and labourers ought both to do.

P. Have you not made advances sufficient to enable you to judge whether we may take advantage of this suggestion, and how?

B. The suggestion that capitalists should give higher wages than they do, to be of any worth, must at least be preceded by a knowledge how the suggestion can be acted upon. If the whole capital is already employed, an increase of wages can only be accomplished through an increase of capital. Persons who are impatient for an increase of wages earlier and more rapid than can be achieved through gradual increase of productiveness, have only one other resource to turn to—not demands (almost assuming the form of threats) upon capitalists who are doing their utmost, to do the impossible, but appeals to wealth-possessors to refrain from some portion of their consumption in order to convert more wealth into capital. Demands upon capitalists for higher wages might be met by asking the persons who make them: Ought capitalists to pay wages without reference to the returns which they expect? Ought they, in other words, to distribute the wages-fund on different principles to those which are known to guide them now? For it is evident that the wages of some can only be increased by lowering the wages of others.

P. Are you quite confident of the truth of this latter assertion?

B. We do not see how the wages of any workmen are to be increased without lowering the wages of others, except by increasing capital. Present increase of wages, to some, out of a capital which, if increased at all, is to be increased in the future, must mean present decrease of wages to others; unless, indeed, the altered distribution of the wages-fund lead to greater saving, in which case the wages, instead of being consumed, are saved and added to capital.

P. How does this exposition of yours square with what is going on every day around us? Will not your assertion, that increase of wages to some, unaccompanied by increase of

capital, must mean decrease of wages to others, ever be considered as at variance with fact?

B. Not for ever, but only till people are better instructed. The exposition to which you have helped us seems to correspond exactly with fact; although the unpractised eye may not be able to trace the working of a principle throughout the whole of the varied, entangled, and partially-hidden dealings of daily life. The increased wages of some, the diminished wages of others, the advent of new and the departure of old workmen; the transfer of capital and migration of workmen from one branch of business, one district and one part of the world to another; the increase of numbers, and the comparatively slow or rapid increase of capital, taken together, create a variety of appearances, only to be explained by the application of the principles which we have learned from you.

P. If the wages-fund in any country were large enough, supposing it to be distributed in equal portions among labourers, to give a sufficiency to all, would not that be a great improvement upon a method of distribution which gives superabundance to a comparatively few and condemns many to want?

B. Such a distribution would give alike to the idle and industrious, to the drunken and sober, to the dishonest and honest, and would make it impossible to add to the capital, or even to maintain it undiminished. If we have not been mistaken in our former answers, the wages-fund never could have reached its present magnitude by a distribution of wages which disregarded the producing powers of those who applied for them. The alternative, with which you are attempting to puzzle us, of satisfactory wages through an indiscriminate distribution of the wages-fund, or unsatisfactory wages through discriminating distribution, is not the one really offered to mankind, which is good qualities and satisfactory wages, or bad qualities and unsatisfactory wages.

P. We have examined together the reasons which have

led society to forbid and prevent attempts to deprive possessors of wealth of any of their possessions against their consent; we know that many men have no wealth, and many men less wealth than is desirable for their well-being; we know that every human being must have an opportunity of consuming some portion of wealth in order to sustain life; and we now see that the resource open to persons willing to sell their labour is inadequate to supply the necessities of all. Is not this very sad? Can it be that it is irremediable?

B. The poor-laws and numerous charitable institutions which distribute wealth, in some cases gratuitously, and never adhering to the strict principles laid down by capitalists in paying wages, are the means that have been resorted to for supplying the wants of those who are shut out from maintenance through the distribution of the wages-fund. While we know that much misery is relieved in this way, we are compelled to acknowledge that much remains unrelieved, and almost seems to be unrelievable. Driven to suspect that much of the misery which we are attempting to relieve is unrelievable, our desires and our efforts ought to be all the stronger to keep it off, to prevent its occurrence.

P. So far as you have yet observed, can you think of any better plan for making our store of wealth conducive to the general well-being, than by allowing its free circulation agreeably to the wills of its possessors, with the reservation that society will not knowingly abide unrelieved destitution?

B. We cannot see how anything better is to be done than to allow capitalists to appropriate their capital and distribute their wages-fund in such a way as, in their judgment, will best tend to secure the replacement, with increase, of all the capital consumed.

P. Is there any reason to expect, under our present arrangements, that the want and misery hitherto prevailing will ever be materially diminished?

B. Our former conversations have led us to decide that there are reasons for such expectations; but there must be

no departure from the laws which confer rights of property and protect them, and consequently sanction and encourage in capitalists that distribution of the wages-fund which will promote its increase.

P. What are the reasons to which you allude for expecting the future diminution of want, while capitalists decline to give any wages at all to some, and dole out quite inadequate wages to vast numbers ?

B. Our reasons for not despairing of the future diminution of want are drawn from the conviction that people are now more alive than they ever were formerly to the possibility of making men better conducted and more capable, by judicious education. Progressively, as education advances in doing that work, will the number of those diminish whom capitalists will not employ, or to whom they will not, or, more properly, cannot, pay a sufficiency of wages.

P. Granting it to be possible to confer upon all the young, by good education, all the desirable qualities as perfectly as will be compatible with the age at which they are first thrown upon their own resources, can it be expected that they will then be able to earn sufficient wages ?

B. The principal difficulty, if any, might be looked for at starting. Some lines of business, as we know, so far from offering wages to the young, require payment from them or their guardians. Lines of business, such as these, ought to be looked upon as partially places of education for the young; and employers are paid accordingly. Till the young are fairly fitted to earn wages they must be dependent upon their parents and guardians.

P. After all these allowances are made, is it likely that beginners will receive good wages ?

B. Not so good as they may expect to earn after a time; but good as a consequence of the estimate formed of their improved producing powers.

P. Is a low wage much less tolerable to a workman of full age and strength than to a beginner ?

B. Of course. His chances of bettering himself are small. Those of the beginner ought to be great. The wages of the full-grown labourer are the measure of all the work that he will ever be able to do. The wages of the beginner are no measure at all of the work that he ought to look forward to be able to do.

P. What is likely to be the effect upon intelligent young workmen of their position of small wages at starting, with the consciousness that every increase of wages must be preceded by proofs of their increased ability to serve or to produce?

B. It must be to lead them to cultivate their own powers, to cherish in themselves all the qualities that they feel to be good, to acquire command of temper, patience, and application, and even to turn mortification and ill-treatment into occasions of self-discipline.

P. Is there no danger lest the constant striving for increased wages should lead to restlessness, dissatisfaction, and an unfair estimate of an employer's willingness to act kindly and justly by his workmen ?

B. It cannot be denied that there is danger of the kind, but it may be guarded against.

P. What are your notions of the best means of guarding against the danger lest such a source of unhappiness should spring up in a young workman, abide with him through life, and turn much that might be pleasant into gall and bitterness ?

B. A steady aiming at self-improvement, both in disposition, and in aptitude and intelligence, with a confidence that this self-improvement will sooner or later bring its reward in wages, as well as in other ways, is not likely to be disappointed. The incapacity or narrow spirit of employers will sometimes prevent their appreciating the services rendered or the work performed for them; but perseverance in working assiduously for them as if their treatment were more considerate should be our resource for turning what we dislike to good account in our own improvement. The time comes

at last when a better employer offers or is to be sought. Come what may, the workman has that which will cheer him in his disappointments and add a relish to his prosperity. Contentment of disposition, while neglecting no opportunity of obtaining industrial advancement, free from morbid and apathetic insensibility to avoidable discomforts, is best sought for by a steady perseverance in performing what are acknowledged to be duties.

P. You have, I dare say, heard occasionally of more active or aggressive measures by workmen to bring their employers to a better appreciation of their services ?

B. Yes; they resort to combinations and strikes.

P. What do you understand by a combination ?

B. A united resolution only to work for employers on certain conditions.

P. And what is a strike ?

B. A simultaneous cessation from work, when employers refuse to comply with the demands which their workmen had combined to make.

P. When a combination runs its course, with or without the resort to a strike, what effect will it produce upon wages ?

B. It is easier to say what it cannot do, than what it will do. It cannot increase the wages-fund. It cannot, therefore, increase average wages. It might alter the distribution of the fund, raising some wages, lowering others.

P. May it not produce some effect upon future wages ?

B. If the combination, by partially controlling the action of administrators of capital, could make their capital more productive, future capital, the future wages-fund, and future wages would be increased. If the administrators of capital are more likely to employ capital profitably when uncontrolled by their workmen, a combination will probably cause future wages to be smaller than they otherwise would be.

P. Can you not say whether employers are more likely to earn large profits free from the control, than under the control of their workmen ?

B. That question is best answered by obtaining answers to two other questions—Who are administrators of capital? and who are workmen? The first are persons who have acquired sufficient confidence in their own capacity to be prepared to risk their capital as a means of earning profit, and who have inspired other capitalists with confidence to trust to them the management of their capitals which they do not feel competent to administer. The second are persons who have had no opportunity of acquiring or inspiring such confidence; and the few among them whose destiny it is to become administrators of capital at a future time may better strengthen their prospects of success by resolutely attending to the advice and practice of more experienced administrators than by yielding to the dictation of those who have acquired no administrative capacity.

P. Is it impossible, then, that combinations should ever bring about any improvement in the condition of labourers?

B. We have considered only their possible effect upon wages which, where any effect is produced at all, must be to raise some by lowering others, and to make the future wages-fund smaller than it otherwise would be. Combinations, better called, perhaps, deliberations of labourers for other purposes, might be advantageous to their employers as well as to themselves. They might be made the means of bringing to the employers' notice defects of organization and arrangement, neglect of contrivances for health, cleanliness, and comfort, the admission of men of indifferent character and offensive conduct, obstructing, instead of forwarding, the general work. By the rectification of these oversights, they would improve their own position and capabilities, and place at the disposal of their employers a larger future wages-fund, out of which they might receive wages commensurate with the greater productiveness of their work.

P. Have you anything to say in commendation or justification of strikes?

B. Nothing. They who resort to them admit them to be

evils—evils to be endured for the sake of escaping from greater evils; whereas, according to our views, they are evils to be abjured as likely to aggravate other evils which ought also to have been abjured.

P. Trying to bring to bear all the information of which you are possessed upon the subject of wages, to what should you attribute the miserably low wages to which so large a number of labourers are compelled to submit?

B. Proximately, to the smallness of the wages-fund out of which wages have to be distributed; remotely, to the ignorance, idleness, thriftlessness, drunkenness, and dishonesty through which so much less wealth has been produced and preserved, than might be now distributable had there been a more general prevalence of qualities the opposite of these.

P. And on what do your hopes rest that labourers will ever rise to the receipt of better wages?

B. On the better teaching and training of the young, by which they may become possessed, as men, of the qualities which will enable them to raise up a sufficient wages-fund, and afterwards to maintain it so proportioned to the number of labourers as to afford sufficient wages to all.

P. Is there rational ground for expecting that such teaching and training will ever be adequately provided for all the young?

B. There are signs in abundance that the time is not far distant when the duty owed by parents to their children, by adults to the young, will be properly attended to. The aim in our schools should be to make good parents. Every virtue will be comprehended and provided for in that aim. One generation of good parents will leave nothing to be sought for. Similar generations must follow and succeed.

ON LABOUR-BUYING.

P. We have gone at some length into the duties which labourers owe to their employers, to society, and to themselves. You have formed convictions, and given expression to them, upon the line of conduct which you ought to be preparing to pursue on leaving school. You will have to sell your labour. Next to your own attainments and disposition, nothing is more likely to affect your comfort and prospects than the character of the employer whom you serve. You ought to be able, with the assistance of your friends, to make a good selection among the various openings of service presented to you, and after a while to verify whether you and your friends in your behalf had done so; to judge whether your employment is up to what you had expected or ought to have expected, or better or worse; and if the latter, whether you would be wiser in looking for a change, or in making the most of what you had fallen upon. Besides, while receiving wages, you will not wish to exclude yourselves from the opportunity of becoming employers in your turn, or of becoming superintendents of some departments of work—appointments which require qualifications akin to those of administrators of capital. To decide upon these matters wisely, you should understand the principles by which capitalists and administrators ought to be guided in the application and management of their capital. The steadiness with which these principles are observed, or the extent to which they are disregarded or deviated from, even before the consequences of either kind of management have had time to

develop themselves, will form the grounds of your approval or condemnation of what you observe, and will cause you to contemplate the work on which you are employed with confidence or apprehension—prepare you to participate in the success, or to save yourselves from the wreck to be reasonably anticipated from your employer's management. Taking up the work cut out for an administrator of capital from the point at which we left it, what do you say is his object?

B. To earn profit.

P. Are the profits of all capitalists the same?

B. No; they differ quite as much as the wages of different labourers.

P. The different wages allotted to different labourers are determined in a great measure by the estimate formed of the worth of their labour by their employers. Whose estimate determines the different profits of different capitalists?

B. We are not aware that the different profits of different capitalists either are or can be determined in any such way. They are not, like wages, distributed out of any existing fund. They are the increase to be obtained by the application of capital.

P. Are there no discernible conditions or laws which determine the profits of different capitalists?

B. Most probably there are, and we would gladly know them.

P. It is by observing what is actually going on, and by reflecting on what we observe, that we may hope, as heretofore, to find the knowledge of which we are in search. The arrangement and classification of what we observe, as we go along, will help us to draw correct and useful inferences. Beginning with farmers, or capitalists engaged in the cultivation of the land, some earn large profits, many moderate profits, others fail to earn profit, and a few even lose their capitals. Suppose we divide the whole body of farmers into two classes—one of those conspicuous for their intelligence, industry, skill, sobriety, vigilance, and popularity with the

labourers whom they employ; and the other, of those greatly their inferiors in these qualities: which would earn the larger profits?

B. The first, of course.

P. If we were to classify builders in the same way, would your decision equally apply to them?

B. It would.

P. And to manufacturers of every kind?

B. To them also.

P. There are some kinds of work beset with special danger and hardship, such as gunpowder-manufacturing, mining, and well-digging; and others peculiarly uncertain, such as hop-growing and exploring for metallic ores: would you modify your decision in regard to the capitalists engaged in them?

B. Not at all, unless to insist upon the almost certain failure of those who had not most of the good qualities stated in a high degree of perfection.

P. May we say that the distribution of the profit-fund—the uncertain future, among capitalists, is as much determined by their respective qualities, as the distribution of the wages-fund—the certain present, among the labourers, is by their respective qualities?

B. This much appears certain: that the qualities of capitalists must greatly influence the profits to be earned by each, if the profits be not wholly determined by them.

P. Whether the profits of each capitalist be wholly or only partly determined by his qualities may be learned by comparing capitalists who are equal as to their qualities, but otherwise differently circumstanced. Take, for example, two such bakers, one supplying from his bakery twice as many loaves as the other: which would earn the larger profit?

B. The baker who supplied the larger number of loaves.

P. Or two tanners, one with twice the number of pits and twice the quantity of hides, and bark, and other requisites for converting hides into leather?

B. The tanner with the larger means.

P. Or two carriers, one with twice as many vans, waggons, horses, warehouse-room, &c., as the other?

B. The carrier with the larger means of transport.

P. Can you not now approach a little more nearly to a full statement of the conditions which determine the respective portions of the profit-fund likely to accrue to different capitalists?

B. The qualities of each in combination with the quantity of his capital.

P. We have spoken of the profit-fund as something future and uncertain: will capitalists toil and incur risk for uncertainty?

B. No: they toil and risk for that which is certain, mixed up with the uncertainty.

P. And what is that?

B. The increase, ascertained by long experience, to be obtainable by the judicious application of capital and labour, subject to occasional failures from inclemency of weather and other casualties which man has not yet been able to foresee and guard against, but which are more than counterbalanced by the numerous instances of large increase.

P. Is it possible to ascertain what portion of a capitalist's profit is attributable to his personal qualities, and what portion to his capital?

B. Not to our knowledge. Some capitalists derive the whole of their profit from their capitals.

P. Who are they?

B. People who are called annuitants, who have lent their capitals and have nothing to do but to receive the interest from the employers who borrowed their capitals.

P. The practice of borrowing and lending capital may assist us to an opportunity of ascertaining how much of a capitalist's profit ought to be attributed to his personal qualities, and how much to his capital. But we must be acquainted with the language in which these transactions are spoken of, and know how to interpret it so far as to avoid being misled

by it. When capitalists borrow and lend capital, in what terms do they generally speak of these transactions?

B. The capital borrowed and lent is more frequently called money than capital.

P. We have more than once adverted to the convenience in conducting industrial concerns, of having the use of a common measure in which to estimate different commodities and different kinds of capital. When money lent comes into the possession of the capitalist who is to employ it, what is the first step which he takes for that purpose?

B. He exchanges it for labour, material, and instruments of production, as may best suit him.

P. How could he earn profit if unable to exchange it in this way, if compelled to retain it as money?

B. He could not earn profit at all. As with wages, so with loans—they are measured and spoken of in money; but the money's worth is as much uppermost in the thoughts of the capitalist who borrows money as in those of the labourer who receives it.

P. When we hear loans from one capitalist to another spoken of as so much money borrowed and lent, what ought we to understand?

B. That they are loans of capital, measured, paid, and repaid in money, for the convenience of borrowers and lenders.

P. You are aware that when loans are made, the interest contracted to be paid is generally spoken of as so much per cent.: what do you understand by that expression?

B. A stipulated number of pounds and fractions of pounds for every hundred whole pounds; thus 2*l.*, 2*l.* 10*s.*, 3*l.* 5*s.*, 4*l.* 10*s.*, 5*l.*, 6*l.*, as may be agreed, for every hundred pounds.

P. By this mode of computation, the amount of interest varies with the amount of the loan. Is not the amount of interest affected to some extent by the length of time for which the loan is made?

B. We ought to have added that when interest is stated to be so much per cent., the time is understood to be a year.

When that is expressed, the loan is said to be at so much per cent. per annum.

P. The rate of interest for a year being agreed upon, you have learned from your other studies how to get at the amount which ought to be paid for less or more than a year.

B. It is a question of proportions. And the interest on any loan for a given time will bear the same proportion to the interest for a year as the number of days for which the loan is made bears to 365.

P. If a farmer were to borrow a certain sum of money to increase the profit which he was getting from his farm, what do you suppose he would begin to do with it?

B. To lay it out—that is, to change it for additional sheep and cattle, manure, tiles for draining, improved implements of husbandry, and to hire more labourers.

P. If a shipwright were the borrower?

B. He would probably lay it out in increasing his stock of timber, extending his yards and workshops, and replacing his machinery by other machinery better adapted to improved methods of construction, and in hiring more labourers.

P. If an associated body of individuals constituting a railway company, water or gas company, or dock company were the borrowers?

B. They would also, as speedily as possible, exchange the money for something that would enable them to earn a profit.

P. Bearing in mind that we have much to learn hereafter concerning the uses of money, as between borrowers and lenders, what is that which really remains by the borrower?

B. Capital.

P. You will learn also, by and by, that many loans are made without even the passing of the money, in which the magnitude of the loan is measured in money: what then passes into the possession of the borrower?

B. Capital in reality as well as in appearance.

P. But where money does pass from the lenders to the borrowers, what becomes of it?

B. It goes forth immediately to do other work, perhaps to serve as a measure for other loans.

P. Who knows best, the borrower, or the lender, in what shape the capital can be employed most profitably?

B. The borrower, since he is to employ it; and the use of money clearly enables the lender to place capital at the disposition of the borrower, so as to give him every facility for adapting it to his business.

P. It is known that there are about forty million pounds of capital on the books of the savings-banks of this country, belonging to more than a million depositors, who are content to receive a rate of interest varying from two and a half to three per cent. per annum: do you know why they do not get more?

B. Because nobody who can be safely trusted will give them more. Because this capital has to be lent out again so as to incur no risk and to be returnable at short notice to the depositors; and the managers of the banks have to pay their expenses out of the difference between the interest which they receive and the interest which they pay.

P. What becomes of this 40,000,000*l.* capital?

B. It finds its way through various channels into the possession of administrators, whose purpose is to make it earn profit for them.

P. When capitalists wish to obtain interest for their capitals without incurring risk, and mistrust their own ability to select the safest and most trustworthy among the various administrators of capital ready to borrow, are there any facilities accessible to them similar to those enjoyed by depositors in savings-banks?

B. We should suppose that there are. The want being felt, it is conformable to all experience that pains will have been taken to supply it.

P. In reality, bankers and other associated capitalists are prepared to offer their security to lenders and to make their compensation out of the higher rate of interest at which they

lend, taking the trouble as well as the risk of finding suitable borrowers. All these practices, and the arrangements to which they have given rise, we must examine at a future time. Taking for granted, at present, that arrangements of this kind do exist, may we say that capital passes readily from those who cannot, or would rather not, employ it to those who can and will employ it, and are held worthy of being trusted?

B. That appears quite reasonable, the rate of interest being settled with the other terms on which the loans are contracted between the various borrowers and lenders.

P. Let us now try whether, with the aid of this knowledge of transactions which are every-day occurrences between capitalists, we can ascertain what portion of the whole profit ought to be assigned to a capitalist in virtue of his capital, and what portion on account of his personal qualities as an administrator. If two farmers, equal in attainments, and with equal capitals, were cultivating similar farms, what should you expect of their profits?

B. That they would be nearly alike.

P. But if one of these farmers had twice as many cattle and sheep, more manure, and better buildings and machinery?

B. The farmer with the larger capital would make the larger profit; for otherwise he would lend his surplus capital to somebody who would allow him interest for the use of it.

P. Reducing the capitals to a common measure, and supposing the capital of one farmer to be 3,000*l.*, while that of the other was 4,000*l.*, and assuming that their profits were equal, what would happen?

B. The farmer with the larger capital would lend the 1,000*l.* capital which, by the supposition, was yielding him no profit, and thereby obtain interest in addition to the profit which he had been previously earning.

P. Next, assuming that their profits were respectively 750*l.* and 1,000*l.* per annum, what would the farmer with the smaller capital be likely to do?

B. He would borrow 1,000*l.* more capital if an opportunity of doing so were presented to him; and as there always are capitalists anxious to obtain income from the loan of their capitals, he would most likely succeed in obtaining it.

P. Supposing five per cent. to be the rate of interest at which he borrowed, how would he stand as to profit in comparison with the other farmer?

B. The capabilities of the two farmers being equal, and the capitals at the command of each being the same, they would earn alike. The profit of the borrowing farmer therefore would be 1,000*l.*, out of which he would have to give up 50*l.*, leaving him a profit of 950*l.* per annum.

P. The prevailing rate of interest being given, can we estimate the portion of profit attributable to the personal qualities of the administrator of capital?

B. If we subtract the interest on the capital employed from the total profit, the remainder may be taken to represent the remuneration of administrative capacity in conjunction with the advantages of an acquired position.

P. According to this division, the profit of the farmer with the larger capital would be 200*l.* remuneration for capital, and 800*l.* remuneration for administrative capacity, while that of the farmer with the smaller capital (previous to his borrowing) would be 150*l.* remuneration for capital, and 600*l.* remuneration for administrative capacity, or 200*l.* less than the earnings of the other as administrator. How does this square with the notion of equality of remuneration, where there is equality of attainments?

B. This temporary disparity, for so it may be considered, promotes the effort of the farmer with the smaller capital to borrow, and thus to place himself on a level with one his superior only in point of capital.

P. Do you think we are borne out by what is passing around us in affirming that administrators of capital earn profits in conformity with their several qualifications and capitals?

B. Not exactly. But we are warranted in saying that there is a tendency towards a distribution of profits among capitalists according to the magnitude of their capitals and the excellence of their qualities, not overlooking the influence of the character and position which they may have acquired.

P. How could you make this out?

B. In this way. If among a large number of capitalists, equal in all respects, the profits of some were greater than the profits of others, there would be a tendency in administrators and capital to quit the less for the more favoured employment, till the profits in all approached uniformity. If with equal qualities, but unequal capitals, the profits were the same, the administrators employing the larger capitals would be under an inducement to withdraw some of their capitals to lend and obtain interest elsewhere, till equality of profit was established where there was equality of attainments and capital, or an inequality corresponding with the inequalities of capital. If with equal capitals, but unequal qualities, profits were equal, men with the superior qualities would be tempted to seek elsewhere profits more in keeping with their industrial proficiency.

P. Is there nothing which is constantly operating to counteract this tendency? Is it always easy for administrators in one branch of business, or one part of the country, to transfer their capitals and their capabilities to positions where larger profits may be expected?

B. It is not always easy. Hazardous, inconvenient, and expensive transfers are not made without the prospect of great advantages. But there are occasions when small extra profit will create a movement. Loanable capital shifts readily enough from one employment to another, attracted by the higher, repelled by the lower rate of interest; and the unplaced or rising administrative capacity is attracted by a much smaller difference of profit than would serve to displace one fixed and so far well requited.

P. What do you think of the influence of family attachment, of friendship, and of gratitude in securing positions in which large profits may be earned?

B. These influences are at work concurrently with the others. That cannot be denied. And it would be very difficult to attach the weight strictly assignable to each as we contemplate the achievements and career of the various persons engaged in conducting industrial works. The different periods of time, also, during which men who may be equal in all other respects have been before the world, must make a difference in the character and position assigned to them in the estimation of others, and quicken or retard the set of capital and customers in their favour. While we recognize the tendency in profit to distribute itself among capitalists according to their several capitals and qualifications, we need not shut our eyes to the other influences which, although less general and potent, are acting sometimes with, and sometimes against them.

P. Would it be any advantage to do away, if possible, with the modifications introduced by feelings of sympathy, affection, friendship, and gratitude into the distribution of wages and profits otherwise likely to occur from the joint efforts of men, acting merely as capitalists and labourers, to acquire wealth?

B. Quite the reverse. These feelings, judiciously directed from the beginning, strengthen rather than weaken, the mainsprings of industry. It would fare ill with industrial qualifications if parental affection did not watch over the education of children, and if solicitude for their welfare did not continue through life.

P. Granting that attachment to family and friends may occasionally incline administrators of capital to appoint injudiciously to places of trust and responsibility, where the prospect of remuneration is great; are there no industrial benefits resulting from this attachment which ought to be set off against such drawback?

B. If attachment to family and friends lead capable men to persevere in their vocations longer than they might otherwise, the increase of wealth consequent upon their protracted exertions may more than compensate to society for occasional losses resulting from industrial preferences bestowed, not on industrial, but on family considerations.

P. Can you adduce any other justifications for the interference of what may be called family and friendly partialities with industrial considerations?

B. Where attachment subsists between employer and employed, the growth of long service, causing the exact estimate of present and future service to be overstepped, it would be difficult to show that increase of wealth was impeded by it. If sympathy and attachment are extended towards the next generation, the aged servant inducting his employer's children into some of the mysteries of his craft, and the aged master giving a strong preference to his servant's children over strange applicants for wages, their equals, perhaps their superiors, in attainments, it would also be difficult to show even that these concessions were unfavourable to industrial success.

P. You have pointed out very clearly the beneficial action of feelings of attachment in fertilizing as well as in sweetening labour, but is there not at times mischievous action which ought not to be overlooked?

B. The cases of mischief, when they occur, are not fairly attributable to kindliness of feeling, but to misdirection of judgment. The father who trusts his son with capital, or places him in a responsible situation without having ascertained his fitness for the trust, inflicts damage upon him, and makes him the cause of damage to others, not through his fondness but through his folly. Damage is done to the young whenever an impression is created in their minds that the affection borne towards them by others may be made to supersede, instead of being brought to assist their own efforts at self-culture and self-guidance.

P. Is not the interference of parents and friends in the placing of the young frequently condemned as "favouritism?"

B. It is a common practice with many to affix an ugly name to conduct which jars against their own wishes and efforts. When a capitalist or person in authority abuses a trust, or endangers an industrial concern by misappointment, a term expressive of his dishonesty or fatuity would be more appropriate than an accusation of jobbery or favouritism, which might equally be hurled against him if his appointment of a friend or kinsman happened to be a judicious one.

P. If it be a blessing to the young to have parents and friends capable of pushing them forward, must it not be a disadvantage to those who have no parents and friends to assist them?

B. Certainly. But if society or those who interpose on behalf of society will but contrive, through education, to call up in them a sense of how much their future well-being depends upon capacity of self-guidance, they will find little reason to deplore their own disadvantages, and still less to envy the advantages of their apparently more favoured contemporaries.

P. If we could separate the whole number of employers or administrators of capital into two parts, one of those who were born capitalists, or predestined to be capitalists by virtue of their parents, and the other of those who were not; which do you think would form the larger part?

B. We are at a loss to guess.

P. If we could separate them into those capable of good self-guidance and those incapable, should you also be at a loss to guess which would be the more numerous?

B. Those capable of good self-guidance must be the more numerous, since the incapable have been and are continually dropping out of the ranks of employers.

P. Which of the young, then, think you, are destined to

be the future employers—the incapable who are born capitalists, or the capable who are not born capitalists?

B. The capable non-capitalists. But those who are both capable and capitalist-born must be more favourably placed than either for becoming employers.

P. We will defer to some future time the consideration of which among all those for whom the means of obtaining a good education have been provided are most likely to become capable employers, those who have superabundance of wealth provided for them or those who are only put in the way of earning wealth. We will now return to the distribution of profits among the various capitalists. It results from what we have so far discussed that the conditions which control or determine this distribution may be more easily studied by making a separation of the entire profit into the parts which have already attracted our notice, and which may always be distinguished even when profit is presented to us as a whole. Will you describe these parts?

B. They are, first, remuneration for the use of the capital, commonly called interest, and, secondly, remuneration for the administration, which last is susceptible of being subdivided into remuneration for the risk and remuneration for the labour of superintendence.

P. Can you cite some instances where these divisions occur in practice, and also others where the profit is wholly appropriated by the capitalists or associated capitalists, and if susceptible of any such division is only subjected to it for the purpose of examination?

B. As instances of the first, there are numerous shopkeepers, merchants, and manufacturers,—some as individuals, some associated as partners, who administer their own capitals, paying wages, and taking care to keep their capitals unimpaired: they keep the whole profit, divided of course, where there are partners, in conformity with the articles of partnership. Secondly, there are large joint-stock companies, the stock or shareholders in which are relieved from the task of

superintendence, delegating that duty to directors appointed by themselves. The profits, as they accrue, after paying the directors for their superintendence, are divided among the stock-holders in proportion to their several shares, as remuneration for the risk and use of the capital, under the name of dividends. Thirdly, there are capitalists who when invited to take shares in industrial concerns, shrink both from the risk and the trouble, but consent to lend capital at a rate of interest settled beforehand, guaranteed by the other associated capitalists, and independent of future profit or loss. These take remuneration for use of capital only.

P. You must be prepared to examine and interpret the phenomena of industrial life in whatever point of view they are presented to you. It may be objected that the very different rates of profit realized by tradesmen not far from equal in attainments and in the same town are scarcely reconcileable with your theory. What would you say to three such tradesmen earning respectively profits of 90 per cent., 50 per cent., and 25 per cent.?

B. The analysis of profit which you have assisted us to make enables us to show that these different rates of profit confirm the soundness of our theory, while they test our ability to apply it. These tradesmen might have respectively capitals of 500*l.*, 1,000*l.*, and 2,500*l.*, the first a baker, the second a grocer, the third a draper. Subtract 5 per cent. interest on their capitals from the profit of each, and there will remain as remuneration of administrative capacity 425*l.*, 450*l.*, and 500*l.* A uniform rate of profit in businesses requiring different quantities of capital but conducted by men not very dissimilar in attainments would indeed be inexplicable; whereas the divergence from uniformity is readily accounted for—it is a consequence of the desires and efforts of each man, labourer or capitalist, or both in one, to do the best for himself.

P. When we turn from the contemplation of capitalists and labourers to that of men as they actually exist in society,

do we find any who are labourers only—that is, possessed of no capital of their own?

B. Unfortunately, there are very many.

P. Can you give me some general description by which they may be recognized?

B. They are the very young, especially those whose parents have not capital sufficient to bestow any, however little, upon them. Among adults, they are the drunken, the wasteful, the ignorant, and the untrustworthy.

P. Some years hence, when the better education now provided and the better still about to be provided and to be more generally diffused, shall have had time to bear fruit, do you expect that there will be fewer mere labourers or non-capitalists?

B. We may reasonably expect that there will be fewer, since young labourers entirely unprovided will not be flung upon the world in such large numbers; and adults will be more effective producers and more economical and judicious consumers.

P. As it is vain to expect that men, whether ranking as capitalists or labourers, or mixed of the two, should continue to thrive if ungifted with those qualities through which alone we have agreed well-being can be secured, I shall put no more questions about them. They must be left to the reformer's care, or be superseded by those whose teaching and training have placed them beyond the need of a reformer's care. Leaving them out, where shall we find labourers or non-capitalists?

B. Only among the young who have not yet attained to proficiency as producers, nor had time to effect savings of any note, except as indications of wholesome thoughts of self-discipline and of right feeling, in regard to the preparation needful for the performance of future duties. Their hope of immunity from suffering during the earlier years of their industrial life will greatly depend upon the ability of their parents to continue the protection granted to them during

childhood till they have overcome the first difficulties in the way of self-support.

P. Where must we look for capitalists or non-labourers?

B. Among the aged, or those who, having done their share of work, are entitled to repose under the shelter of the income which their capital, the fruits of their industry and economy, enables them to enjoy, independently of further labour of their own.

P. In middle life, which will be most conspicuous as regards their numbers, labourers or capitalists?

B. Labourers; because most capitalists lend or invest their capitals and follow up their professions or handicrafts. The labourers on farms must be numerous, compared with the farmers; the servants on railroads compared with the directors; the officers and crews of ships compared with the owners; and so on, comparing the artisans with the master-manufacturers, and the clerks with the merchants and bankers.

P. Where do you class professional men?

B. Rather among labourers than capitalists. They may be said to be highly-gifted labourers, capable of performing services which it is beyond the means of one single employer or establishment of capitalists to retain exclusively, which are available for many, and need not be appropriated by a few. They are to be seen, however, so engaged at times. Surgeons on board of passenger-ships sell their labour to the ship-owner as completely as the officers and crew.

P. Assuming these views to be correct, the larger part of mankind are capitalists covertly, while they are overtly labourers. Among the smaller part, the administrators of capital, are there not many who have but small capitals of their own?

B. There are many; and, adopting your expression, they are overtly capitalists, covertly labourers, highly paid on account of their administrative capacity.

P. In what capacity do administrators of capital commence their industrial career?

B. As labourers, in many instances destined by their friends for positions as administrators; in many others, with no such aid, developing the qualities essential to make a good administrator.

P. Do those who are specially classed as professional men, such as lawyers, physicians, and surgeons, when they attain great eminence in their professions, frequently pass into the ranks of administrators of capital ?

B. No. Their earnings in their professions are far too large to incline them to any such change, even if their attainments qualified them to make it. They and their heirs may be great capitalists, while few among them are administrators of capital.

P. Do architects and consulting engineers take rank among professional men, and therefore among labourers ?

B. Yes. Their services are too costly in general to admit of their being exclusively retained by one establishment. They sell them piecemeal to many, as they are asked for. Their earnings vie with those of barristers and physicians.

P. Do they pass occasionally into the ranks of administrators of capital ?

B. We believe they do. Their vocation makes them familiar with the details and combined arrangements of the concerns for which their advice is sought. In this respect their position is different from that of other professional men.

P. What would induce an architect or a consulting engineer to quit his profession for that of an administrator of capital ?

B. The prospect of increased income.

P. If a large building firm or engineering establishment lost an important partner, or required an additional one in consequence of the increase of their business, is it likely that a professional man who had been and was making himself a name would receive proposals ?

B. Yes, and that he might listen to them favourably.

P. Let us assume that his fees had been growing steadily up to 2,000*l.* a year, with appearances of further increase, and that he had accumulated a capital of 10,000*l.*, which brings him in 400*l.* a year. If he were invited to join the new concern as a partner, with his capital, the computation being that his share of the annual profit would be 3,000*l.*, do you think he would accept the offer?

B. Possibly not. He might consider that the uncertainty ever attaching to change would not be counterbalanced by the proposal of an addition of 600*l.* a year.

P. But if, on a careful consideration of the proposal made to him, after a minute survey of the establishment and a perception of the improvements which he might introduce, he could see his way to 4,000*l.* a year as his share of profit, with a probability of raising it to 6,000*l.*, what would he decide to do?

B. Most probably to enter on the new business, the increased emoluments more than compensating for any risk that he can apprehend from the abandonment of his profession.

P. To take an example from among labourers earning lower wages:—An opportunity of going into business as an administrator of capital might be presented to one who had been in receipt of 3*l.* a week for some years, and who had saved a capital of 500*l.*, from which he was deriving an income of 20*l.* a year. Will he avail of it?

B. If he were a prudent man, his decision would be determined by a careful estimate of the profit which he might reasonably expect to earn from employing his own capital, and the comparison of that with the wages and interest which he might continue to receive. If he could see his way to an income as large as he had been receiving, with a prospect of increase, year after year, up to 500*l.* a year, he might be expected to turn administrator of his own capital. Prospects less favourable might fail to attract him towards a new employment, with all the risks of which he could not be acquainted, and only confirm him in his resolution to work

for wages as heretofore, and to persevere in adding to the capital from which he was deriving interest.

P. When workmen show great intelligence and skill, combined with trustworthiness and economy, and may, therefore, be contemplating, either singly or in unison with others, to embark in some business of their own, are offers sometimes made to them by their employers which induce them to defer or even to relinquish their intentions ?

B. Yes; the posts of foremen or of superintendents of departments are offered to them at wages or salaries larger than any profits which they could hope to earn.

P. Are there not persons whose employments make it very difficult to class them exclusively either among administrators of capital or labour ?

B. There are ; for between the two extremes of the mere labourer, who has no tools of his own, and the capitalist, whose capital enables him to purchase all the labour which he requires, subject to his own supervision, there are—the artizan with his own tools ; the master carpenter, who occasionally sells a portion of his labour ; and the pastrycook and greengrocer, who will earn wages in dressing a dinner, or in waiting on the guests at it.

P. Will the rate of wages and rate of interest, as compared with the rate of profit, have any tendency to determine the number of labourers ready to abandon the position of labourers, and to assume the responsibilities of administrators of capital ?

B. If the rate of wages were high compared with the rate of profit, labourers would be little disposed to quit their own ranks and swell those of administrators of capital ; whereas, if the rate of wages were low compared with the rate of profit, the movement always going on among labourers to become administrators would not fail to be quickened till some approach to an equilibrium between the remuneration of labourers and administrators was established. If the rate of interest were high compared with the rate of profit, it would incline

labourers to lend their capitals and continue to sell their labour. If the rate of interest were low compared with the rate of profit, the inducement would be in the other direction—to administer their own capitals. When the rates of wages and interest are high together, the disposition in labourers to continue to sell their labour and to lend their capitals will be confirmed. When they are low together, the movement of labourers outward will be further quickened. When the one rate is high while the other is low, they will act in opposite directions.

P. It might almost be thought from your explanation that the incomes of capitalists were not greatly in excess of those of labourers. Is this really the case ?

B. Scarcely, for the best conducted labourers receive interest as capitalists as well as large wages as labourers. Some of them glide into the position of administrators of capital; and where they do not, it may be fairly presumed that it is more for their advantage to continue labourers; but where they do, it can hardly be said that as capitalists they earn less than they did as labourers. Labourers, as a class, however skilful, give evidence only of their producing power; whereas capitalists, as a class, make known to us their capabilities as savers as well as producers, and their incomes, accordingly, may be expected to exceed those of labourers. Besides, as we have remarked before, the younger portion of the class of labourers will include the beginners who have not had time either to earn or to save much. Unsuccessful administrators of capital have no resource but to slide back into the rank of labourers out of which they came, while inferior labourers remain in that rank unaided perhaps by any income derivable from savings.

P. If the comparison be made not between capitalists and labourers, but between administrators of capital and labourers ?

B. Larger incomes would still, in general, fall to the share of administrators of capital, because they are selected from

the ranks of labourers on account of their good industrial qualities. Many professional men and labourers raised to situations of great trust may rank above the majority of employers in the largeness of their incomes, but it must be borne in mind that while the highly paid labourers and professional men decline to administer capital because they can do better, the majority of labourers are not elected to be administrators of capital because they are not possessed of the requisite qualifications.

P. Is there any reason to expect, in countries where wages are comparatively small, that profits will be large, and *vice versâ?*

B. From what we have been considering, we should say rather the reverse. Where wages are large, profits must be large; for otherwise labourers competent to become administrators would decline to quit service and to relinquish large wages for small profits.

P. I have heard it stated that wages fall as profits rise, and rise as profits fall; and since capitalists disburse the wages, must it not follow that the more they pay the less will they retain?

B. The question put by you rests upon a mistaken assumption—that the fund divisible between labourers and capitalists is a fixed quantity; whereas the wages-fund alone is fixed for the time being, and the profit earnable by capitalists is indefinite.

P. Can you explain why a prevalence of large wages should lead you to expect that profits would also be large?

B. Because large wages mean large producing powers, since no employer would give a quantity of wealth as wages which he did not think would be exceeded by the wealth to be produced. Employers, also, having the option to continue in the ranks of labourers, can only be supposed to abandon them for the prospect of remuneration in the shape of profit greater than that which they might receive for certain in the shape of wages. Assuming it to be possible, for the purpose of

examination, that large wages should for a time co-exist with small profit, capitalists would be tempted to lend their capitals and abide in the ranks of labourers till the diminution in the number of administrators of capital would cause profits to rise and continue to rise so long as administrators were not placed on a level in point of emoluments with labourers no more than their equals in industrial attainments.

P. And how would profits be affected by a prevalence of small wages ?

B. They would be small in proportion; for labourers would be on the watch to exchange small wages for larger profits, till the prospective remuneration of administrators was in keeping with the remuneration of labourers quite on a level with them in industrial attainments.

P. Is not this exposition at variance with the common notion of antagonism between capitalists and labourers, employers and employed, receivers and payers of wages ?

B. It is. But minute examination has reversed many a prevailing notion in the same way.

P. Where is the corrective to be found for any tendency in employers to err in the distribution of the wages-fund ?

B. Not in coercing them, but in instructing and persuading them. Failing in the attempt to do this, another resource is open to the labourer, he can transfer his service to an employer better able to direct it profitably, and to pay for it according to its worth.

P. As it is possible that labourers may err as well as employers, is there any course by which each may be open to correction without aggravating the loss always attendant upon error ?

B. Freedom of negotiation or bargaining, and transfer of service after the completion of existing engagements, seem to be the best available means for shifting and improving the positions of those whom experience has shown to be ill-suited to each other. In the prodigious varieties of taste, temper, and qualifications, which are to be found, a reassortment of

service may lead to a happier combination, to mutual comfort, to better wages, to larger profit—results scarcely to be expected from attempts at coercion.

P. Do not attempts at coercion, if made by labourers, imply a belief in them that more wages can be extracted from employers?

B. That must be. They overlook that the utmost effect of their attempts at coercion would be an altered distribution of the wages-fund—more for themselves and less for other labourers. The coercion intended for employers would be a coercion upon other workmen through employers.

P. Do not attempts at coercion, if made by employers, imply a belief in them that more labour can be purchased by their wages-fund?

B. They do. Whereas, if the wages-fund of some employers, by contrivances partly compulsory, partly deceptive or disingenuous, could be brought to procure for them extra work, it could only do so by leaving fewer or less effective labourers to be engaged by the other administrators of capital.

P. Understanding that we would never disregard the feelings of kindliness, attachment, and mutual consideration, which ought to bind together all who stand related as employers and employed, what is one of the chief tests of the goodness of employers?

B. The profit which they earn for themselves—one source of increase to the wages-fund of the future, and one proof of the ability with which the wages-fund of the present has been distributed among labourers according to their merits.

P. As the larger number of labourers necessarily continue to be labourers or receivers of wages during the whole of their industrial lives, how may they hope to earn a competency?

B. By not neglecting to take the proper steps for becoming capitalists while they continue to sell their labour—that is, by first making their labour productive—an object to be sought

for by employers at large wages, and then by saving and lending their savings on good security.

P. What will lead the smaller number of labourers to quit the ranks of receivers, to join the ranks of payers of wages?

B. The beginning of their career will be the same as that of other well-conducted labourers. They gradually acquire capital, and feel that they are acquiring administrative capacity. Appointments of foremen or of superintendents are presented to them. They perceive openings for establishing themselves, or offers of partnership are made to them. They balance the prospects of profit against the wages and the interest of their capital on loan; and, according as the balance inclines, and their tastes, acquirements, and habits, of which they must judge, seem to fit them for a new position, they make their election. Let their election be what it may, their prospect of well-being is not to be estimated by the class or rank to which they attach themselves, but by the judgment, capacity, and conscientiousness with which they fulfil the duties of either.

P. There is much for you to learn before you will be able, even with the aid of the principles which you have mastered, thoroughly to understand the bearing of all the transactions of daily occurrence between labour-sellers and labour-buyers. You must, therefore, defer awhile the attempt to form a judgment of the circumstances in which it might be expedient that either party, or both concurrently, should make or decline engagements, or renew, or seek to alter expiring engagements. It may happen that all the knowledge necessary to help you to a safe judgment will not be obtainable by you till long after you have quitted school. But because, at your age, it may be difficult, or even impossible for you to decide what you ought to do in particular circumstances of rare occurrence; it may be quite possible to decide what you ought not to do in any circumstances, whether as sellers or buyers of labour, or acting in both capacities.

B. We ought not to neglect any effort for the faithful per-

formance of all our engagements, and, till they are completed, we ought to do our utmost to maintain kindly feelings with those whom we serve, or by whom we are served.

P. Besides this, although you cannot say what special work you will have to do, or how you will have to do it, may you not feel quite certain of something that you must not omit to do—of something, the just appreciation of which throws great light upon the question of combinations, strikes, and lock-outs, which we must examine one of these days?

B. We must not omit to work to produce while we consume to live. Any contest between labour-sellers and labour-buyers, which leads to suspension or diminution of production, must be followed by diminution or by slackened increase of the future wages-fund, by the rusting of fixed capital unproductively instead of its wearing out productively, by smaller profits and smaller wages, by a diminution of that wealth already too little to keep destitution at bay. There may be unavoidable suffering, but we need not add to it by a voluntary and reckless abandonment of labour, when we can scarcely pretend to see our way to applying it, with all our vigilance and all our energy, so as to realize, even in the distant future, all that is needful for the welfare of society.

P. The evils of a suspension of work to industrious men are greater even than you have stated them to be. So long as the habits of industry are sustained by the industrious out of work, their self-inflicted secession from labour is self-inflicted torture. With some, secession from labour, if long continued, breaks down habits of industry, and adds many other evils to those of privation. The voluntary submission to such penalties might be praiseworthy, if some future improvement, commensurate with present suffering, could thereby be secured; but, at present, we can discern nothing to recommend secession from labour, since it can only tend to diminish, not to increase wages already considered too small.

ON INTERCHANGE.

P. We have settled something together in regard to the duties owed by employers and employed to each other, and also in regard to the relations between capital-employers and capital-lenders—enough to impress you with a sense of what ought to be your aim and purpose in entering upon the industrial work that will be accessible to you. One effect of what you have learnt so far, must be that you have been made conscious of how much more you have yet to learn. Much that you have to learn will necessarily be reserved for the time when you are regularly recruited into the ranks of labour. But there are matters, many matters, that you may study now, and the learning of which will assist you in learning easily what must be deferred for a future time. If, from the insight so far gained into the reciprocal duties of employers and labourers, you are impressed with a sense of the obligations, self-imposed upon you when you accept service from an employer, you will be still more impressed when you are more accurately informed of the trials, and dangers, and vexations to which he is exposed while earning his profit, and of the fortitude, vigilance, and equanimity with which he prepares to meet them: you, meanwhile, regularly receiving your wages out of his capital. There is one topic to which we have already adverted—the general agreement, in many respects, as to the kinds of commodities desired to be consumed for the purpose of sustaining life. For example, bread, milk, butter, meat, sugar, tea, coffee, as articles of food; calico, woollen cloth, and leather, as articles of dress; coal

and wood for fuel; tenements, with brick walls, slated roofs, and glass windows, as articles of shelter; and tables, chairs, and beds, as articles of furniture, and the raw materials, out of which they are made, are sought for by all. Now, as to the method of obtaining these things: in what way do labourers or sellers of labour set about that work?

B. With the money, or some of the money for which they sold their labour, they purchase so much of these commodities, out of the store ready provided, as they think suitable to their circumstances. Money acts as a title, acknowledged by the possessors of the store, to a limited portion of the commodities of which it is made up.

P. And how do the lenders of capital obtain their supplies?

B. They receive their interest in money, with which they obtain commodities of the kinds, and in the quantities suitable to their tastes and circumstances.

P. And how do the employers of capital obtain their supplies?

B. Much in the same way—by using the money reserved for the purpose out of former profits.

P. Which of all these parties undertake the replacement of the commodities thus consumed?

B. Of course, the employers or administrators of capital.

P. Does each one of these set himself to replace the very commodities which he and his labourers and the lenders to whom he paid interest have consumed?

B. He would find it no easy matter to do that, were he so foolish as to make the attempt.

P. Why so?

B. We have only to bear in mind the commodities which you have enumerated—and they form but a small portion of all the commodities used and consumed by everybody—to be satisfied that no one employer could superintend the production of them all. The course actually pursued is very different. Each employer fixes upon some small number of

commodities, or of classes of commodities, which he produces and sells, and thus continually receives money to be disbursed again in paying wages and interest, and in purchasing the commodities necessary for his own maintenance and the continuance of his business.

P. Is there any striking difference between this method of producing, and the method pursued in the savage state, or during the first steps out of barbarism towards civilization ?

B. The effort of each producer in that state of existence is to produce the very commodities which he proposes to consume. Sometimes he is driven to consume commodities because he has no opportunity of producing others. When he employs labourers, he feeds, clothes and lodges them, and directs their labour to reinstate what they consume and wear out, and to keep in repair what would fall into decay if not looked after. He may direct the building of tenements, but they will be for himself, family and servants to dwell in; or the keeping of flocks and herds, but they will be for the purpose of supplying meat and woollen and leather articles of dress and furniture to his household ; and he may till the ground, but only to secure bread, and vegetables, and fodder for the men and cattle under his care.

P. In two such different states of society, if we were to fix our attention upon a hundred employers of labourers, might it be possible to see all employed similarly in one, and all differently in the other ?

B. Yes.

P. And which would you consider the better method of producing ?

B. That in which each employer dedicates himself to a special class of commodities, because in that way he and his workmen acquire a promptitude, skill, and intelligence that lead to the production of commodities larger in quantity, and superior in quality, than could be accomplished by the other method.

P. Has any name been given to the practice or custom

which assigns different kinds of productions to different men, instead of having all commodities produced promiscuously by everybody ?

B. The name " division of labour " has been given to it.

P. Can you describe to me some of the advantages of division of labour ?

B. By enabling particular individuals to apply themselves steadily to particular kinds of work, it gives that opportunity for practice which leads to skill. By making it unnecessary to shift constantly from one kind of work to another, it saves time and labour. By admitting of the performance of work in places where food and clothing could not otherwise be procured, mines can be explored, ores smelted, and ships navigated, whereby commodities producible only in particular positions, soils, and climates are placed within the reach of the industrious in every country.

P. When employers of capital give themselves up to the production of commodities, little or none of which they intend to consume, how do they expect to obtain the commodities which they really wish to consume ?

B. By exchanging the commodities which they produce for different commodities produced by others.

P. In what state of mind must they be as to the opportunities which they will have of making exchanges after they have produced ?

B. They must have a feeling, approaching to certainty, that they will find other producers willing to make exchanges with them—as anxious to effect exchanges as they are themselves.

P. Ought they to be careful what kinds of commodities they undertake to produce ?

B. Certainly ; for, if they produce commodities which others will not accept in exchange, they may find themselves perishing in the midst of their own productions.

P. Is there any other reason why they should be careful to produce what others will desire to consume ?

B. The suffering from the want of such care would probably not be confined to themselves and their families. If we are not mistaken, it would be extended to the labourers in their employment; indeed, to all labourers—to society.

P. A little thought will be well bestowed in order to ascertain whether you are mistaken or not. Can you explain in what way the suffering of an employer, who has produced commodities which he is unable to exchange, can be extended, as you suspect it may be, beyond his own family?

B. By the supposition, he has produced commodities which he has no wish to consume. They might be commodities not even adapted for his consumption. If they also prove unsuitable for others, the capital consumed in their production is lost or destroyed. His ability to employ labourers is diminished or gone. His labourers must seek wages elsewhere. But the wages-fund is diminished; and hence the wages of some labourers must be diminished. While, therefore, he is the principal sufferer, and next to him the labourers whom he employed, although in a less degree; labourers and society in general do not entirely escape.

P. With such reasons to give for your opinion, you may cease to fear that you can be mistaken in it. The effects described by you follow inevitably from the misdirected employment of capital. In a large community like ours, the waste of capital or diminution of the wages-fund caused by the mismanagement of some employers is neutralized, and more than neutralized, by the excellent management of others. It may be concealed from those who, moving in the midst of careful and careless, intelligent and ignorant, successful and unsuccessful employers, are unaccustomed to examine the results assignable to each. But it is not the less certain. What employers were you thinking of just now, when you spoke of their being unable to appropriate to the purposes of self-support the commodities which they could not exchange?

B. All employers, even bakers, would suffer to some extent from this disability. We were, however, thinking of such employers as instrument and machine-makers, ship-builders, and those exclusively occupied in producing mineral ores and other raw materials not usable till they have undergone several long processes of manufacture.

P. Reserving for future consideration the cases of employers who may be compelled occasionally to wait for the opportunity of effecting an exchange of their products, let me now ask: Whether the greatly-increased power of production bestowed upon employers and their labourers by division of labour is accompanied by conditions or obligations, inattention to which might make the gift a source of privation and suffering?

B. Yes; it is accompanied by the condition that each employer must produce commodities which others will desire to possess.

P. Whence did you obtain your knowledge of this condition?

B. From the consideration that the well-being, nay, the very existence of each employer, depends upon his ability to obtain the commodities which he wants, in exchange for his own products which he does not want except as a means of procuring what he wishes to consume.

P. In speaking of the necessity of producing commodities likely to be wanted by others as an obligation imposed upon those who would enjoy the advantages of division of labour unalloyed with danger, do you wish it to be understood that there is any difficulty in fixing upon the production of commodities that others will be sure to want?

B. We don't know that there is any difficulty. We should fancy there cannot be much.

P. Do you know that there is none? Much or little, we may as well try and find out what it is. Do people's wants or desires vary with the seasons; and does taste or fashion vary independently of the seasons?

B. Yes; and administrators of capital certainly ought to try to anticipate these changes.

P. Do people's desires for particular commodities, even for such indispensable necessaries as bread, meat, clothing, and fuel, urge them to seek for unlimited quantities of these commodities? or only for limited quantities, which having obtained, they will seek for other commodities?

B. For limited quantities only; and administrators of capital ought therefore to be on their guard, after the production of these limited quantities, to produce other commodities with which they will find it easier to obtain the commodities wanted by themselves.

P. When we consider the length of time that it takes to produce many commodities and the distance from which many have to be brought, and that the parties engaged in producing and bringing them ought to be able to judge of probable changes in future wants as compared with present wants, and to judge also how other administrators may be employed in producing the same or different commodities, shall we say that all people are competent to exercise this discretion?

B. No; only the more intelligent and experienced.

P. Should you expect to find the persons qualified to assume this responsibility among capitalists accustomed to administer their own capitals and judged worthy to be trusted by others with their capitals, or among labourers?

B. Among capitalists.

P. Does it matter to society whether these capitalists, in adopting division of labour, direct their capitals successfully or not?

B. Greatly. Upon their success it depends whether society will be supplied with the commodities which it wants or with those which it does not want, with some largely in excess of its wants and others far below its wants, or with all about in proportion to its wants.

P. Does it matter to the capitalists thus engaged?

B. Yes; for upon their success it depends whether they

will get much or little or nothing in exchange for their productions.

P. Does it matter to the labourers who obtain wages from these capitalists?

B. Not immediately. They are secure, for a time, of the wages for their labour, whatever may be the future fate of their employers. Later, they also may be put to inconvenience from the want of success of their employers, be compelled to seek service elsewhere, and find their wants not so well supplied as if their employers had been successful.

P. As the direct loss from want of success falls upon the erring capitalist, and the direct gain from success accrues to the right-judging and acting capitalist, does this put society somewhat at its ease that pains will be taken to supply it with the commodities which it most desires to consume?

B. It does. Society is assured that those of its members best qualified for the work will undertake it with the knowledge that they will thrive in proportion to their success in serving and gratifying society.

P. Is there anything arising out of the adoption of division of labour which can justify labourers in attempting to coerce their employers in the management of their capitals?

B. In no other way than by declining to work on the conditions offered to them. Engagements of all kinds ought to be religiously made and religiously kept; and services ought to be cheerfully rendered on both sides for the common good.

P. It being conceded that upon administrators of capital is to devolve the work of selecting what commodities they will undertake to produce: can you form any opinion as to which they will be, or, as there may be uncertainty in the result, which capitalists will intend them to be?

B. You do not expect us to name the commodities. You will be satisfied with our stating that administrators will be intent upon producing commodities for which the largest

quantities of other commodities are likely to be obtained in proportion to the cost of production.

P. Ought capitalists to have this aim in employing their capitals?

B. Yes; because they will be striving with their capitals to supply the commodities which society is most likely to want.

P. May I record it as your opinion that employers are not only engaged in striving to produce the commodities for which they are most likely to obtain in exchange the largest quantity of other commodities, in proportion to their expense of production, but that they ought to do so?

B. Yes; because it seems to us that, so far as they succeed, they really, among them, supply all the wants of society.

P. I may tell you, for your encouragement, that all who have studied these subjects systematically, as you are studying them now, have come to the same conclusion. But this must not deter you from continuing your studies to strengthen your own convictions, whether they differ from or agree with the convictions of others. To facilitate our further progress, we will adopt the term in general use to signify the "quantity of other commodities obtainable in exchange" for the commodity which it is desired to part with. You have often heard it, I have no doubt?

B. Yes, "value."

P. As it will greatly conduce to our comfort, and also to our security against error and confusion, to make sure that this word "value" is to preserve its meaning invariably, I will ask you to reverse the order of proceeding which brought us to it. From the thing, for which we saw that it was desirable to have a name, we got to the name. Let us now return from the name to that for which the name stands. Will you tell me what you mean, what all people who use the English language sensibly mean, by the word "value?"

B. We mean by the value of a commodity "the quantity of other commodities obtainable in exchange for it."

P. Is this meaning of "value" steadily adhered to in general conversation and popular literature?

B. It is not. It is very commonly departed from when the adjective "valuable" is formed from it. "Valuable" is often employed when the word "useful" would be more appropriate.

P. Can you explain to me how the terms "useful" and "valuable" may both be employed advantageously?

B. We call all those things useful which conduce to our gratification and which are accordingly objects of desire; and those things valuable which will procure for their possessors other things in exchange.

P. Are not all useful things valuable?

B. No. All valuable things are useful, that is, objects of desire; but many useful things, such as air, will not enable those who enjoy them to obtain other things in exchange.

P. We may meet hereafter with occasions for caution lest we be led into error from the misuse of this term. You are, I make sure, sufficiently on your guard for the present. The question which I am about to put may appear needless or trivial, but I wish to have the answer recorded. It concerns us so nearly to know how people ought to conduct themselves in exchanging with one another, that I would rather put an unnecessary question than risk an oversight. Are values fixed or fluctuating?

B. Fluctuating.

P. How do you know that?

B. From the different quantities of commodities which we have been able to bring home from the shops at different times in exchange for the same quantity of money; and from what we have heard and seen, and read in the shop-windows, in the trade circulars, and in the columns of the newspapers appropriated to the states of the markets.

P. Is "value" the word generally used in these advertisements, reports, and publications?

B. No. "Price" is more commonly used in its stead.

P. When you say, used in its stead, does it serve the same purpose?

B. Yes, and better; but it implies the adoption of money.

P. If price and value mean the same thing, is it not a defect in the structure of language to employ two words where one would suffice, or, indeed, answer better?

B. We did not say that these words meant the same thing.

P. But you said they served the same purpose.

B. We answered your question concisely, and without sufficient explanation. We might have added that value is a more general expression than price; the price of a commodity being its value measured in one denomination—money; while its value may be measured in many denominations—in any other commodity.

P. Can you show that values fluctuate when prices fluctuate?

B. Including money among commodities, fluctuations of prices would also mean fluctuations of values; but if we exclude money from among commodities, considering it merely as a measure of values, fluctuations of prices must mean fluctuations of values, unless we had observed that the prices of all commodities always rose and fell together. Whereas we have observed that prices fluctuate very differently, some rising while some fall and others remain stationary.

P. Have you ever known the price of the four-pound loaf to rise from sixpence to a shilling while the price of a pair of shoes has remained stationary at six shillings?

B. Often.

P. What should you say were the values of a pair of shoes measured in bread at those different times?

B. Twelve loaves at first, and only six loaves afterwards.

P. What gives rise to fluctuations of value? Have they been traced to any causes, or are we compelled to see them pass before our eyes, classing them among those occurrences which, if not inexplicable, we have not yet succeeded in explaining?

B. Some of the causes of fluctuations of value are plain enough. We will not say as much of them all. They may be known to others, although hidden from us; and if not, we should scarcely be warranted in affirming them to be inexplicable.

P. I will just propose a few questions with the view, not only of bringing home to you what you know and what you do not know, but of showing how, by putting together the things which you know in a certain order, inferences pointing to instruction in self-guidance will force themselves irresistibly upon you. We will leave aside for the present the use of money as a means of measuring values. The "buying and selling of commodities" is always reducible to the "exchanging of commodities," and that involves "values." The places in which exchanges are negotiated are familiarly known as "markets," and it will be convenient to use that word. We will begin by assuming a certain state of market, that is, a state in which certain quantities of different commodities are expected and brought there, and certain values have been settled between the various exchangers. After a time, suppose, while everything else remained unaltered, that the quantity of wheat, flour, and bread was diminished one-half, what would happen?

B. The value of wheat, flour, and bread would rise; by which is meant that a certain definite quantity of each, such as a bushel of wheat, a cwt. of flour, or a four-pound loaf of bread, would procure for its possessor a larger quantity of other commodities in exchange.

P. How do you make out that this rise of value will certainly take place?

B. Because, it being granted that everything else is to remain the same, the possessors of other commodities will be desirous of obtaining as much wheat, flour, and bread as before, and in their anxiety not to be shut out from securing a fair share of the smaller quantity to be had, they will bid more than they did before for each bushel of wheat, cwt. of

flour, and loaf of bread. The holders of the diminished quantity of wheat, flour, and bread, besides, would be anxious to obtain as much of other commodities as before, in spite of the diminished quantity of what they had to offer, and seeing the eagerness of others to obtain from them what they had not, they would not be slow to ask an increased value for each bushel, cwt. and loaf of what they had.

P. What would happen with regard to the values of all commodities except wheat, flour, and bread?

B. They would fall, measured in wheat, flour, and bread.

P. Would the values of other commodities, measured in one another, undergo any change?

B. We do not know why they should.

P. Suppose, among those commodities were potatoes, rice, and other articles of food, might not some of the parties disappointed in obtaining their former quantity of wheat, flour, and bread, try to get a larger share than before of potatoes and rice?

B. They would be very likely to do so. We did not think of that. And they might offer a larger value to tempt the holders of potatoes and rice to gratify them.

P. Might not some of the frequenters of the market, in order to have more commodities to offer for articles of food, decline to take trinkets and articles of ornament which they had been in the habit of bargaining for?

B. That might happen also. It is plain that a diminished quantity of a few commodities in the market might create a considerable disturbance in values.

P. If while other things remained the same, the quantities of wheat, flour and bread were doubled?

B. The values of these commodities would fall, because the holders of them would only be able to get the commodities which they desired to obtain in exchange by offering more. The value of all other commodities measured in wheat, flour, and bread would rise; those of trinkets and articles of ornament more, perhaps, than those of potatoes

and rice, since the frequenters of the market who had commodities to spare from what they had been in the habit of giving for their usual quantities of wheat, flour, and bread, would be seeking to exchange them for luxuries, rather than for potatoes and rice.

P. I gather from your answers that two causes are at work to produce the changes of value just noted, alterations of quantities and alterations of desires. How would an alteration of desires operate by itself?

B. To produce a rise in the value of those commodities for which an increased desire was felt, and a fall in the value of those commodities for which a diminished desire was felt.

P. We can test this by fancying, while everything else remained the same, that a hundred strangers suddenly presented themselves in the market: what effect would be produced upon values by their advent?

B. Values would rise.

P. You are now puzzling me. Do you mean that the values of all commodities would rise? or only the values of some commodities? And if the latter, of which commodities would there be a rise of value?

B. We answered thoughtlessly. There cannot be a rise in the values of all commodities. A rise in the value of one commodity means a fall in the value of some other commodities measured in the commodity whose value is admitted to have risen. As to which commodities would rise and which would fall in value, under the circumstances supposed, we have not the means even of guessing. We must be told something more about these hundred strangers.

P. What do you wish to know, in case I should have the information you seek for?

B. We should like to learn what these strangers desired to get in the market, whether bread, meat, shoes, hats, or groceries.

P. And if I were able to tell you that their desires were for groceries, what then would you say of values?

B. That the values of groceries would rise.

P. Again you have puzzled me. Let us accompany these strangers to the dealers in groceries, and attend to their bargaining. They will ask for groceries. What will the grocers ask or look for in return?

B. They would look for money.

P. We have agreed to defer all thoughts of money for the present, but its use is so general and convenient that we find it no easy matter to prevent its forcing itself upon our notice. We will, therefore, instead of a summary dismissal of money-considerations, suppose the strangers to produce the money looked for by the grocers, what would happen?

B. The value of groceries would rise.

P. And in what commodities would there be a fall of value?

B. In all other commodities as measured in groceries; and more particularly in money, of which the quantity at market was larger than before.

P. Let us now revert to our original position, and, excluding money, suppose the strangers to have brought some other commodity—say wheat—how would that affect your answer?

B. The value of wheat would fall, and all other values measured in wheat would rise, because while everything else remained the same, the quantity of wheat would be increased.

P. And if they brought the same commodities already in the market and in the same proportions, and their desires to take away were also similar to those of the persons previously at market?

B. Values would remain unaltered.

P. But the quantities of commodities at market would remain unaltered by the advent of one hundred strangers bringing nothing, not even money. How then should values be affected, for you have repudiated the notion of a general rise of values?

B. We must retract and amend an inconsiderate answer. We see clearly now that an accession of strangers in the

market bringing nothing with them would produce no alteration in values.

P. We seem to have got hold of some of the causes that are capable of altering values. It is a great assistance to be able to isolate causes, one after another, if only in our thoughts, when we desire to judge of the effect of each, and to separate those that are causes in appearance only, owing to prejudice, from those that are real. Let us restate the judgments which you have formed. All other things remaining the same, if the quantity of one commodity at market were increased?

B. Its value, by which is always meant the value of some definite quantity, would fall; the values of all other commodities measured in that commodity would rise.

P. If the quantity of one commodity at market were diminished?

B. The value of that commodity would rise; the values of all other commodities measured in that commodity would fall.

P. If the desire of the holders of commodities to obtain some one commodity were increased?

B. The value of that commodity would rise: the values of all other commodities measured in that commodity would fall.

P. If the desire of the holders of commodities to obtain some one commodity were lessened?

B. The value of that commodity would fall: the values of all other commodities measured in that commodity would rise.

P. You may as well have the advantage of the terms that have been adopted in giving expression to the conclusions which you may form, with the same caution as on former occasions, to avoid sliding into the vile practice of readily using terms without attaching to them a definite meaning. The quantity of any commodity at market is called its "supply;" and the desire felt to obtain any commodity by

the holders of other commodities, is called " demand." Using these terms to express the conclusions at which you have arrived, what are the causes of fluctuations of value?

B. Fluctuations of supply and demand; bearing in mind that by the latter term is meant, not the desires of all men for commodities, but the desires of those only who have commodities to give in exchange.

P. It would be an indication of sad torpidity of understanding in a student if he could rest here and be satisfied, without seeking to push his inquiries forward to the causes of fluctuations of supply and demand. You, I am sure, must be curious to learn something about them. But, before attempting to get at these causes, we ought to have a clear perception of the facts or effects which we wish to account for. As a help to this, I will ask—are the supplies of all commodities equally subject to fluctuation?

B. They are not. There is certainly less fluctuation in the supplies of copper, tin, coal, wool, and leather, than in those of fruits and potatoes.

P. Can you gather together into classes the commodities more subject, and those less subject to fluctuations of supply?

B. Yes; the vegetable products appear to be more subject to fluctuations of supply than the animal, and the animal than the mineral; the former being greatly influenced by the vicissitudes of the seasons, and the latter very indirectly and remotely, if at all.

P. Are all vegetable commodities equally subject to fluctuations of supply?

B. No; the more perishable are much more subject than the less perishable or more durable. The supply of potatoes, for example, is more liable to fluctuate than the supply of corn.

P. How do you account for this?

B. As potatoes do not admit of being stored, even for so long a period as a year, the supply of the year is the produce

of the year. But, it being possible to store corn for many years, an intelligent and economical people will always be provided with a considerable store of corn to meet the contingency of a bad harvest. A bad crop, say, a half crop of potatoes, would mean a half supply; whereas a half crop of wheat need not be less than a two-third, or three-fourth, or even a nine-tenth supply. In like manner, a twofold crop of potatoes would be a twofold supply; while a twofold crop of wheat might not be more than a supply and a half or a supply and a quarter, owing to the quantity withheld from market and kept in ricks and granaries.

P. Are all commodities equally subject to fluctuations of demand?

B. No. Delicacies for the palate, finery for dress, and ornaments for the house are more subject to fluctuations of demand than bread, shoes and stockings, beds, chairs and tables.

P. Can you classify commodities according as they are more or less subject to fluctuations of demand?

B. Comparative luxuries are more subject to fluctuations of demand than comparative necessaries.

P. Can fluctuations of demand fail to accompany fluctuations of supply?

B. Scarcely. A diminution in the supply of a necessary, such as bread, by raising its value, will indispose people from offering as much as before for luxuries, which will consequently fall in value, and attract them to demand other necessaries, such as potatoes and rice, which will consequently rise in value. An increase in the supply of a necessary, such as bread, by lowering its value, will induce people to seek gratification not so much from an increased consumption of necessaries as of luxuries, which will consequently rise in value.

P. Are present supply and demand, and hence values, liable to be affected by the anticipation of future supply and demand?

B. Yes; the symptoms of a bad harvest will cause supplies to be withheld from market, and a demand to spring up for the purpose, not of consuming, but of reserving for future use the supplies brought to market. On the other hand, the symptoms of an approaching good harvest will cause additional supplies to be hurried to market, and demand to be deferred, the one to anticipate, the other to await the diminished .value expected from the abundant future supply; together making the anticipated cause of future disturbance of values, the cause, also, of immediate disturbance.

P. Are fluctuations of value slight and rare, or violent and frequent?

B. So frequent as to be almost incessant. Generally slight, but occasionally violent. The anticipation of changes in supply and demand softens their action, and makes fluctuations of value gradual, which would otherwise be abrupt. But it would be difficult to fix the limit above which the value of a necessary might not rise when the supply is very deficient, or below which the value of a perishable commodity might not fall, where the supply is greatly in excess or the demand is suddenly suspended.

P. It seems clearly enough made out that values fluctuate with the fluctuations of supply and demand; and as many of the causes of fluctuations of supply and demand are intelligible to you, we may fairly suppose that most, if not all of them, are well known to the administrators of capital who direct all industrial operations. Does this knowledge influence them in the choice of the commodities which they will set about producing? and how?

B. We feel that it must, although we cannot explain how. We need your assistance.

P. Less than you think. I will simply place before you what you have told me. A knowledge of the causes of fluctuations of supply and demand is a knowledge of the causes of fluctuations of value. If this knowledge could be made to throw light upon future values, would it influence

future productions, and thereby exercise a control over future fluctuations of value?

B. We quite understand that as each administrator of capital may produce what commodities he pleases, his choice will be determined by some prospect of advantage, as he pictures it to himself, and by the desire of gaining it; although we cannot see how fluctuations of value are to be controlled thereby.

P. If an administrator of capital, after forming his judgment upon the probable future value of commodities, were to decide that it was better worth his while to produce some than others, would not his decision influence future values?

B. We begin to see the drift of your questions. His decision being to produce some commodities and not to produce others, his production of the first would tend to lower their value, as his declining to produce the second would tend to raise their value.

P. Amid the fluctuations of value of which we have had experience, there are some conformities to be observed. The examination of them will assist us in our efforts to ascertain the nature and extent of the influences which control fluctuations of value; for that there are such influences is clear enough. A bushel of wheat will sometimes be worth a pair of shoes and at other times two pairs of shoes, and a ton of coals will at one time be worth four bushels of oats and at another eight bushels; but have you ever known a ton of coals to be worth as much as a ton of iron, or a ton of iron as much as a ton of copper, or a bushel of oats as much as a bushel of wheat?

B. We have not.

P. Can you tell me why a ton of coals is never worth as much as a ton of copper? Would not an administrator of capital prefer to have a ton of copper rather than a ton of coals? Would he not obtain in exchange for a ton of copper one hundred times as much of other commodities as he could for a ton of coals? And as commodities are produced to be

taken to market, why does he not produce the commodity for which he can obtain one hundred times as much as he can obtain for another?

B. We can only suppose that he cannot; that the opportunity of producing copper is not, while the opportunity of producing coals is, presented to him.

P. You must not be satisfied with that kind of answer. You must long and strive to reach up to knowledge, and not be content to settle down upon supposition, the offspring of idleness and the parent of ignorance. When a capitalist has produced his commodities and exchanged his commodities, can he tell whether he has made a profit?

B. Yes, if he keep his accounts properly. He will know how much it cost him to produce each commodity, and how much, in the same denomination, he obtained in exchange for it. The excess of the latter above the former—of the value received above the cost of production, if there be an excess—is his profit.

P. Does he desire to make as large a profit as possible?

B. That we have already agreed may be accepted as the desire of all producers.

P. When an intelligent producer is impelled by such a desire, will he endeavour to estimate, as nearly as possible, what value he will be likely to obtain for the commodity which he is thinking to produce?

B. He will.

P. And to calculate, "in the same measure," the cost at which he will be in producing it?

B. And that also.

P. If he come to the conclusion, as regards the commodity which he has under consideration, that the cost of producing it will exceed the value that he can venture to rely upon?

B. He will abandon the thought of producing it.

P. If he see reason to expect that the probable future value will greatly exceed his cost in producing it?

B. He will then employ his capital in producing it.

P. But suppose his attention had also been called to another commodity, the probable value of which when produced would be much more in excess of the cost of production than the value of the former commodity, what would he do?

B. He would employ his capital in producing both.

P. And if his capital were not equal to the production of both?

B. He would then confine himself to producing the commodity which promised to yield the larger profit—the greater excess of value in proportion to the capital expended in its production.

P. If, however, he could obtain additional capital, might he not borrow and employ it in producing some of the other commodity which promised to yield the smaller profit?

B. We will modify our former answer. All the capital at his disposal would be applied to produce the commodities the values of which, as computed, would be most in excess of their cost of production.

P. We will now return to the commodities specially named, beginning with wheat and shoes. We observe that the relative values of wheat and shoes are, sometimes, one bushel of wheat equal one pair of shoes; at other times, one bushel of wheat equal two pairs of shoes. The numerous capitalists, engaged in their production, calculate that, one year with another, the values will be two bushels of wheat equal three pairs of shoes. Would they be likely to make any alteration in the direction given to the employment of their capitals?

B. That will depend upon the comparative costs at which wheat and shoes can be produced. If the cost of producing two bushels of wheat and three pairs of shoes were the same, there would be no motive and no desire to transfer capital from the production of one to the production of the other. If the cost of producing two bushels of wheat and two pairs of shoes were the same, a motive would exist, and a desire arise to produce more wheat, leaving less capital applicable to the

production of shoes. But if the cost of producing one bushel of wheat and two pairs of shoes were the same, a motive would exist, and a desire arise to produce more shoes and less wheat.

P. What would be the effect of producing more wheat and fewer shoes ?

B. To lower the value of wheat, and raise that of shoes.

P. And the effect of producing more shoes and less wheat ?

B. To lower the value of shoes, and raise the value of wheat.

P. To what length would administrators of capital be likely to carry the transfer of capital from the production of one commodity to the production of another ?

B. Till the computed future values of the various commodities were in the same proportion to one another as their costs of production.

P. Can employers transfer their producing powers, so readily as your answer seem to imply, from one business to another ? Do we hear of farmers turning shoemakers or copper-smelters ?

B. No; and the transfer of capital, recommended by a comparison between probable future values and actual costs of production, will sometimes be so slow as to be extended over years before the equilibrium, between values and costs of production, is brought about. There are two forces at hand ready to promote this transfer: loanable capital, sure to be attracted to those capitalists who can earn the largest profits, and new and unstereotyped administrators, prepared to fall in with those lines of production which promise the largest profits.

P. How do you know that loanable capital is sure to be attracted to those branches of business in which the largest profits are expected to be realized ?

B. Because the proprietors of loanable capital are just as much on the look out to obtain the highest rate of interest consistent with security, as administrators are to earn the largest profits; and the administrators, who see their way to

earn the largest profits, will be those most capable and best disposed to offer the highest rate of interest.

P. Can the capital already out on loan to those employers, whose profits are on the decline through fluctuations of value, be withdrawn from them?

B. It can be withdrawn when the period has expired for which the loan was made. But previous to that, it is open to the borrowers to re-lend, at a higher rate of interest, the capital which they have borrowed at a lower, or to re-lend, at any rate, capital which they cannot employ profitably.

P. What do you infer, then, from such a state of values as is represented in the comparison of coals and copper: say, on an average of years, one hundred tons of coals equal one ton of copper?

B. We infer that the cost of producing one hundred tons of coals is considered to be about equal to the cost of producing one ton of copper.

P. Why do you draw that inference?

B. Because, if equal capitals would produce one hundred tons of coals and, say, ten tons of copper, capital would have been attracted, from the production of coals to the production of copper, till the value of copper, as measured in coals, approached one ton copper equal ten tons of coals. Or, if equal capitals would produce two hundred tons of coals and one ton of copper, capital would have been diverted from the production of copper to the production of coals, till the value of copper, as measured in coals, approached to one ton of copper equal two hundred tons of coals.

P. You may now put together the result of our investigation into the subject of values. What are the causes of fluctuations of value?

B. The fluctuations of supply and demand.

P. And what do you mean by demand?

B. The desires of holders of commodities to obtain other commodities.

P. Are there any causes constantly exercising a control over these fluctuations of supply and demand?

B. Yes; the desires of producers or administrators of capital.

P. What are their desires?

B. To make as large a profit as possible; to produce those commodities, the probable future values of which will be most in excess of the cost at which they can be produced.

P. And what is the tendency of this desire prevailing amongst capitalists?

B. To increase the quantity of those commodities, the estimated future values of which are most in excess of their cost of production, and thus to lower their values; and to diminish the supply of those commodities, the estimated future values of which are either below their cost of production, or not sufficiently in excess to compensate the producers, and thus to raise their values.

P. Towards what state of values will these desires of capitalists tend?

B. They will tend to establish, amid the fluctuations of value, consequent upon fluctuations of supply and demand, average values corresponding with the costs at which the various commodities can be severally produced.

P. We have approved of the practice of interchange. We have admitted it to be a good practice, inasmuch as we have recognized that division of labour would be impossible, if the producers, disposed to adopt it, could not feel secure that opportunities for interchange would be presented to them. It does not follow that we must approve of every subordinate practice to which interchange may give rise. This practice of seeking to gain large profits, by obtaining values for commodities large in proportion to the values expended on their production, or given for them, ought to be put upon its trial, and brought up for judgment. How does it lead growers and manufacturers to act?

B. To employ their capitals in producing those commodities which are most likely to be in demand.

P. How does it lead merchants to act?

B. To transport commodities from those places, where the supply is great in proportion to the demand, to others, where the demand is likely to be great in proportion to the supply.

P. How does it lead shopkeepers to act?

B. To take to commodities in masses unsuited for consumption, and to subdivide them into the quantities and forms most convenient to the customers among whom they are at great pains to distribute them.

P. How does it lead speculators or capitalists who apply themselves, whether apart from or in conjunction with other kinds of business, to obtain commodities at one time for the purpose of exchanging them, at some future time, for a greater value than that given for them?

B. To withdraw commodities from consumption, when they are judged to be comparatively superabundant, and to offer them for consumption at a time when they are comparatively scarce.

P. Do these acts, taking their rise out of the division of labour and interchange, shake or confirm your former judgment in their favour?

B. They confirm it, for they all appear to incline to one common end; the supply and distribution of commodities at the times and places, of the qualities, and in the quantities best adapted to satisfy the wants and contribute to the enjoyments of those who have equivalents to give for them, and who are capable of using them with discretion.

P. Your final qualification is well thought of. The fruits of production, however well it may be conducted, are not to be enjoyed, except by those who can establish a title to participate in them, and who know how to consume judiciously.

ON WEIGHTS AND MEASURES.

P. HAVING once taken a clear and comprehensive view of the effects of division of labour—having satisfied yourselves that, among the other advantages which it confers upon mankind, it affords opportunities for continuity of practice and application, whereby skill may be perfected and habits of steady and concentrated labour acquired, to the manifest increase of wealth, both as regards the quality and quantity of the commodities produced—we cannot fail to recognize interchange between the holders of commodities as an essential element in the processes of production. You, I have no doubt, are quite prepared to admit that every contrivance for shortening the time in which any given amount of labour will effect its purpose is equivalent to an increase of production. Run over in your thoughts the contrivances in daily use for applying labour, and tell me if you can find one the object of which is not either to do work in less time than it could otherwise be done, or to do work which could not otherwise be done at all?

B. We cannot name one. All contrivances, whether for producing or for enabling us to enjoy what we have produced, seem to answer one of these purposes—either to do a piece of work, or produce a commodity more quickly and more perfectly, or to accomplish something that would otherwise be altogether beyond our capacity.

P. If some new method of applying labour would enable the same number of men, with the same amount of effort to produce the same quantity of commodities in half the time

previously required, would they produce twice the quantity of those commodities in the same time?

B. They might produce no more of those commodities than before, directing their labour to produce other commodities more in demand; or they might take their ease.

P. This latter use of time set free by an improved method of producing must not pass unexamined. It has been often alleged that if men are enabled to get through certain allotted work in less time than had been previously required for its performance, they would devote the time thus placed at their disposal, not to other work, but to recreation, idleness, or dissipation, according to their several bents.

B. This allegation is belied by the general tenor of experience up to this time. It ignores that men may have a bent for industry, as well as for recreation, idleness, and dissipation. The substitution of the plough, the harrow, the printing-press, and the locomotive, for the spade, the rake, the pen, and the horse, has given to man more wealth for his labour, without disinclining him to put forth his strength. It is to be hoped that, where processes for shortening labour come upon men who are over-tasked at their work, or shut out from those opportunities of mental culture so desirable for their further elevation, some portion of the time thus gained may be appropriated to recreation and self-improvement.

P. Perhaps the parties who hazard these allegations have never considered what kind of people those are whose labour and time are set free by the industrial improvements which have been successively introduced among us. Does any remark suggest itself to you on this point?

B. It will not be the time of the idle and incapable, but rather that of the industrious and capable; and we may fairly presume that they would not misapply any extra time placed at their disposal.

P. Are you not tacitly assuming that a new industrial contrivance, which enables the same results to be accomplished in less time, places that time at the disposal of the

persons who had been previously employed in accomplishing these results by the more tedious process? and are they the persons specially benefited?

B. We were unguarded. Very little observation will suffice to bring home to anybody the conviction that the time saved is not exclusively for the advantage of those who are enabled to produce as much wealth or perform the same service as before in less time. The farmer with his threshing machine, the miller with his water-wheel, the ship-owner with his screw-propeller, the carrier with his locomotive, and the forwarder of intelligence with his magnetic telegraph, and all whom they employ, do not appear to have more time at their command than others.

P. Has not your inquiry into the laws of value helped you to understand how it is that a producer, or one set of producers, is compelled to share the advantages obtainable by an improved method of production with the whole community, whether the improvement be to make the same time and labour more productive, or to accomplish certain results with much less time and labour?

B. The producers under the new improvement, even if favoured in the first instance, are gradually compelled to submit to a reduction of value for what they produce, till they are brought down to a level with other producers, all receiving in proportion to their several costs of production.

P. Are the advantages of the time and labour saved by industrial improvement distributed among all classes of the community?

B. With the reservation that the ill-conducted and the incapable will only share in them so far as they are beholden to the well-conducted and capable for the permission to participate, and of course in a lesser degree than others.

P. We seem to be agreed that we need not hesitate to welcome every process for shortening the hours of labour without diminishing its productiveness as an increase of wealth or an additional opening for recreation and self-improvement,

or partly both, according to the requirements of society and the intelligence of those upon whom the boon is conferred. Since, then, without interchange division of labour would be impossible, and without division of labour wealth and well-being, as we understand them, would be beyond our reach, we must admit that any contrivances or arrangements which serve to make the business of interchange easier and shorter, also shorten the time required for the production of a certain quantity of wealth, or, which is the same thing, make labour more productive. Many of these thoughts may be new to you, or may be mixed up somewhat confusedly in your minds and in the minds of others; but the necessity of attention to them in practice has been sufficiently felt to have impressed itself on general conduct, as I expect you will be able to tell me.

B. Before you put any more questions, will you allow us to mention a difficulty which still confuses us a little, and which we ought not to have passed over without seeking explanation before. We have said that division of labour could not prevail without interchange, and we admit that we don't see how it could; but would it not be more accurate, since division of labour must precede interchange, to say that interchange could not prevail without division of labour?

P. May it not be quite accurate to say both? It is not certain, if we could get back to the origin of division of labour and interchange, that interchange did not precede anything that could be dignified with the name of "division of labour." The savage who had captured some wild animal might have been glad to effect an exchange of part of its carcase with another savage for a hunting-spear, to replace the one lost or broken in the successful chase. But, granting that division of labour preceded interchange, may it not be true that people must first be possessed of the thought that they will be able to effect exchanges, before they will commit themselves to division of labour?

B. We had overlooked the distinction which you have

drawn. It is not interchange which must precede division of labour, but the conviction or knowledge that opportunities for interchange will be sure to occur after the work of division of labour has been accomplished.

P. Cannot you call to mind other instances, where the conviction of what is to follow must precede the undertaking of the work, and thereby be constituted, if not the cause, at least one of the causes of the work itself?

B. Now that you have given us the clue, we begin to doubt whether we could find any instances where the thought, or conviction, or sense of the probability of what is to follow must not precede the undertaking of any kind of work. The thought of the harvest must precede ploughing and sowing; the thought of transport across the ocean must precede ship-building; and the thought of being protected in the enjoyment of the fruits of industry must precede industrial effort.

P. You are now prepared to enter upon the consideration of the contrivances in use for facilitating and shortening the operations of interchange. You have, all of you, at times, been into a grocer's shop. What have you asked for?

B. For sugar, treacle, coffee, tea, rice, raisins, currants. . .

P. You have been, I am quite sure, rather more precise in your demands. Have you not tried to convey some notion of the quantities of those things which you wanted?

B. We have asked for one pound of sugar, a quarter of a pound of coffee, two ounces of tea, three-quarters of a pound of rice. . . .

P. Is there any advantage to you and the grocer in your being able at once to convey to him, by the use of these words pounds and ounces, a knowledge of the quantities of his commodities which you wish to have?

B. It enables the grocer to serve a much larger number of customers in the same time, and to detain each of his customers a shorter time, and thus disengages him and them to attend to some other business.

P. Are there not some commodities which you ask for in much larger quantities ?

B. Yes; we have asked for five or six pounds of potatoes at the greengrocers, and for hundred-weights, and even a ton of coals at the coal-shed.

P. And when you have been to the linendraper's or haberdasher's, although your mothers and sisters are more likely to go there, do you find pounds and ounces assist you to the quantities of linen and cotton goods, or of tape and ribbons, that you want ?

B. No; yards and inches give that assistance there.

P. There are other commodities, such as liquids and corn, for which other means of signifying quantities are in daily use; can you name any of them ?

B. There are pints, quarts, gallons, bushels, pecks.

P. In addition to your experience of the use of these methods of conveying a knowledge of quantity, in asking for a very large number of commodities at the different shops, you have had some practice in making calculations in which all these names of quantities occur, and you ought to understand and to be able to explain to others what they are—what they stand for. I will ask some questions with the purpose of bringing home to you what you know, and what you have yet to learn concerning the principles of those measures of quantity with the use of which you have been so long familiar. To begin with the measure of length: what is a yard ?

B. A yard is three feet.

P. As I should learn little by that answer, if I did not know what a foot is, I must ask for some information about that measure ?

B. A foot is twelve inches.

P. And what is an inch ?

B. Three barley-corns.

P. And what is a barley-corn ? No answer ? I have known a boy say a grain of barley. Ludicrous as that sounds,

it seems to imply that the boy who gave the answer had a conception of something to which he gave the name "yard." He overlooked the fact that grains of barley vary in length, and that it is vain, therefore, to speak of the length of a grain of barley without specifying which grain. Even if he thought to comfort himself with the assurance that the difference in length between two grains of barley must be too insignificant to deserve attention, he would be mistaken, especially when that difference, trifling as it might appear to him, came to be increased more than a hundred-fold in a yard, and still more in longer measures. But you, in answering so readily as you did, gave me to understand that you knew what a yard is; and when, in my wish to ascertain the extent and accuracy of your knowledge, I followed up one question with another, this is what you told me :—A yard is three-thirds of itself; each third is twelve-twelfths of itself; and, again, each twelfth is three-thirds of itself; or a yard is 108-108ths of itself. Now, will you tell me of anything that is not 3-3rds or 36-36ths, or 108-108ths of itself?

B. There can be nothing.

P. I must return to my question: What is a yard, or what is that 1-108th of which 108 make a yard?

B. We don't know.

P. As you wish to know, I can give you some comfort by telling you that you are in a happier state for learning than you were in a few minutes ago, for then you thought you knew when you did not; but now you are aware that you do not know. When the shopman is measuring out the ribbon, or calico, or towelling that has been asked for, have you ever observed a stick in his hand rather more than half his own height?

B. Yes; with which he measures what he is proposing to cut off.

P. You may have seen the length of ribbon, or tape, or cloth measured off by a mark on the counter; and do you

expect the length would be the same whether it were told off on the stick or the counter?

B. Yes, unless the man were dishonest or careless.

P. And if the measures were collected out of a large number of shops, do you think they would all prove to be of the same length?

B. We should expect they would be of the same length.

P. Is it important that they should be?

B. Certainly. A measure that cannot be relied upon ceases to be a measure. It is worse than of no use. It is a snare. A false measure is more dangerous than an ambiguous word, inasmuch as ambiguous words impose only upon the ignorant; fraudulent or inaccurate measures impose upon the well-informed. Danger from ambiguous words may be guarded against by intelligent caution—an easy and improving exercise. The only security against ambiguous measures, where their use cannot be prevented, is in mistrust.

P. Some pains are taken to prevent their use, and to avert so great a calamity as general mistrust. Officers called inspectors of weights and measures visit shops from time to time to ascertain that those in use conform to the standard fixed by law. The inspector takes with him a yard measure certified to correspond with the standard by which all measures in use are to be tested. The model to which all the measures in use must conform is the unit standard measure of length in this country.

Are you prepared, after this explanation, to answer the question—what is a yard?

B. No better answer can be given to anybody inquiring what a yard is than to show him one.

P. Should it so happen that you had only a foot rule by you, could you contrive to answer his question satisfactorily?

B. Yes; by explaining to him that the rule which we held in our hands was the third part of a yard.

P. Some people are curious to know the proportion which the length of the yard bears to that of the pendulum which beats seconds in our latitude. You have often seen the pendulum of a clock; does it matter, think you, what its length is?

B. Yes; we know that the longer it is, the more slowly it beats.

P. There is much to observe and study in the movements or oscillations of the pendulum. But you are, so far, correctly informed; and it has been ascertained that our yard measure is twelve-thirteenths of the pendulum, which beats seconds in our latitude. Can you tell me the length of the pendulum?

B. A yard and a twelfth, or thirty-nine inches.

P. Is our knowledge of the comparative lengths of the seconds-pendulum and of the yard-measure capable of being turned to any useful purpose, besides that of gratifying our curiosity?

B. If the standard yard were to be lost, it might be readily replaced by means of this knowledge. The clock-maker, also, possessed of a yard measure, may make a pendulum of the approximate length off-hand before he puts the final touch to his work by a contrivance for securing not only minute exactitude of length, but invariability as well.

P. You have already told me of the contrivances for measuring lengths shorter than a yard; are there also contrivances for noting the measurements of greater lengths, so as to avoid the inconvenience of an unwieldy number of figures?

B. We have several; among others, the chain of 5½ yards, much used in measuring land; and the mile = 320 chains = 1,760 yards.

P. Having once become acquainted with the notion of a unit standard measure of length, or of extension in one direction, you can have no difficulty in drawing out of it for

yourselves a unit standard measure of surface, or of area, or of extension in two directions?

B. You mean square measure, the unit standard of which is, of course, the square yard.

P. And could you explain, to one needing the information, what you mean by a square yard?

B. We should first ascertain that he knew what is meant by a yard, and then we would draw for him, or measure off on the black board or on the ground, a square, each side of which measured a yard.

P. What are the contrivances for helping us to measure and compute areas or surfaces of smaller extent than a square yard?

B. Having the square yard drawn, it is easy to mark it off into nine square feet, and also to mark off each square foot into 144 square inches.

P. And having a square yard, could you readily make another square containing two square yards?

B. Yes; for we have been through the process of first learning that we could not, when we had thought that we could, and of then actually learning how to do it.

P. Are there any measures of much larger area than the square yard in use for measuring and computing very large surfaces?

B. Several; and one very generally used, the acre = 4,840 yards or 160 square chains; 640 acres making a square mile.

P. From square measure or the measure of extension in two directions, could we get at a unit standard measure of extension in three directions of length, breadth, and depth?

B. You mean of cubic contents. The cubic yard would serve the purpose.

P. For the ordinary purposes of life that would be inconveniently large. A much smaller unit standard measure of capacity or of cubic contents has been adopted in this country—the gallon. Do you know what a gallon is?

B. We don't know exactly, and you will not let us say that it is four quarts.

P. Yes, I will, provided you do not trifle with your own understandings as well as with mine, by saying four quarts without knowing what a quart is.

B. The best plan would be to produce a gallon measure, or a quart measure, with the explanation that four of the latter make up one of the former.

P. Something more is to be learned about the gallon, which I am sure you will be glad to know. Would you not suspect that there must be some arithmetical connection between a gallon and a yard?

B. If the gallon be a measure of three dimensions and the yard a measure of one dimension, that must be the case.

P. The advantage of being able to give a distinct conception of one measure through what had been already settled in another, has been used by our law-makers, when they state the gallon to be a measure of 277·274 cubic inches. You can tell me, I dare say, about what must be the dimensions of a vessel exactly cubic in its form, the contents of which are 277·274 cubic inches.

B. It would measure more than six and less than seven inches in each direction; in fact, a little more than six and a half inches, the cube of which is 274·625 inches.

P. Do you not know how to obtain a measurement more nearly approaching exactitude?

B. Yes; by extracting the cube root of 277·274, we obtain 6·52 inches.

P. If the cubic yard had been adopted as the unit standard measure of cubic contents, how would that be stated in inches?

B. 46,656 cubic inches or nearly 170 gallons, a measure inconveniently large for most of the purposes of life.

P. But do we not occasionally desire to use much larger measures of cubic contents than the gallon?

B. We do; and we have the peck = 2 gallons; the bushel = 8 gallons; and a quarter = 8 bushels, or 64 gallons. We have also several other large measures used exclusively for liquids.

P. They are so various, and applied so capriciously to the different kinds of liquids, that I must leave you to go into them without me. They are all, however, derived from the gallon. Can you mention any of the measures in use for quantities smaller than a gallon?

B. There is the quart, or fourth part of a gallon, and the pint or half-quart.

P. Your visits to the grocer's, butcher's and chandler's shops have brought you acquainted with other methods of estimating quantities besides those which you have gone over. You know that the quantity of sugar, tea, coffee, meat, or soap, put into one scale to make it balance depends upon the thing called a weight, which is placed in the other scale. You see a great number of weights ready at hand which the man who serves you makes use of according to the quantity for which you ask. One of these is our unit standard measure of weight. You most likely know which it is?

B. The pound avoirdupois—frequently written lb.

P. And what is a lb. avoirdupois?

B. The only answer we could give to that question would be to exhibit one, and to request that it might be lifted and judged of by comparing it with smaller weights such as an ounce, and with larger ones up to the cwt.

P. A very good way of answering, too, and sufficient to work upon, care being taken to procure this lb. avoirdupois of the same weight invariably. Some precautions have been taken to make this lb. conform to a test derived from the measure of capacity and hence from the measure of length, so that if the standard lb. were lost or damaged, it might be readily replaced by another. I will try to explain the arrangements that have been made with this view. Let me ask first: If two gallon-measures were placed, one in each

scale of a balance, should you be able to tell whether they weighed exactly alike?

B. We should know that they weighed exactly alike if the scales were poised.

P. And if, after the measures were so placed, one of the scales was lower than the other, could you contrive to poise them?

B. Yes; by continuing to add something to the measure in the higher scale till it came down to a level with the other.

P. When the scales, each with a gallon measure in it, have been carefully poised, would it be possible to fill one of the measures with water, and to put, say a quantity of iron into the other scale exactly sufficient to counterbalance the water, and thus leave the scales poised as before?

B. Assuredly; for that is what is done whenever a liquid, as treacle, for example, is weighed. A weight or weights must be used to counterbalance the vessel which contains the liquid, as well as the liquid itself, making separate note of the weights used for each purpose.

P. What, then, should you say would be the weight of the water?

B. The iron in the other scale. Assuming the measures to be of equal weight, the measure balances the measure and the iron the water.

P. If the water in the measure had been sea-water, and it were to be replaced by spring-water, would it be necessary to make any change in the iron in order to preserve the equilibrium of the scales?

B. It would be necessary to take away some of the iron, because sea-water is heavier than spring-water.

P. If the spring-water were replaced with distilled water?

B. A further quantity of iron would have to be withdrawn to compensate for the smaller weight of the distilled water.

P. We may next suppose the temperature of the water in the gallon measure to be, at one time, 80° and at another

40° Fahrenheit, always understanding the measure to be full: would the quantity of iron to balance the water be the same in each case?

B. No; the particles of water being farther apart when the temperature is raised, the warmer water would require a smaller quantity of iron to keep the two scales on a level.

P. You will have no difficulty in understanding the steps that have been taken to establish a connection between the unit standard measure of cubic contents and the unit standard of weight; between the gallon, and, therefore, between the yard and the pound avoirdupois. The quantity of metal, iron being generally used, which will balance one gallon of distilled water at the temperature of 62° Fahr., is divided into ten parts of equal weight, or into ten parts, each of which will exactly counterbalance every one of the others separately. One of these parts is the pound avoirdupois. All together= 10 lbs. = weight of a gallon of distilled water temp. 62°. Your arithmetical tables have made you acquainted with the names of the weights in use, as well for the fractions as for the multiples of lbs. Will you mention some of them?

B. There is the ounce = $\frac{1}{16}$ lb., and the dram = $\frac{1}{16}$ oz. = $\frac{1}{256}$ lb., and the cwt. = 112 lbs., and the ton = 20 cwt. = 2,240 lbs.

P. The weights and measures which we have gone over are mixed up with others still clung to in different parts of the country, to the great hindrance of commercial dealings. With the spread of intelligence and greater frequency of intercourse, the weights and measures peculiar to certain districts will, no doubt, fall gradually into disuse, and improvements will be introduced among those which are retained. You are aware, I dare say, that even in the metropolis, and among the members of a profession which prides itself upon taking high rank in point of education, pounds and ounces continue in use which are not the pounds and ounces avoirdupois?

B. You mean lbs. and oz. troy weight, used for weighing

gold and silver, and also used by apothecaries, and therefore called apothecary's weight.

P. Physicians patronize these weights as well as obsolete symbols and enigmatical words, corruptions of a dead language, instead of adopting forms of expression common to them with their countrymen to whom it is their duty to communicate instructions, and prescribe regimen and medicine. While such practices prevail, barbarous as they are, you ought to know something about them. Can you tell me the number of grains in the lb. and oz. avoirdupois and troy respectively?

B. The pound avoirdupois = 7,000 grains; the pound troy = 5,760 grains. Thus the pound avoirdupois is heavier than the pound troy. But the lb. avoirdupois is divided into 16 oz., making an ounce = 437½ grains; whereas the lb. troy is divided into 12 oz., making each ounce = 480 grains. Accordingly, while the lb. avoirdupois weighs more than the lb. troy, the oz. troy weighs more than the oz. avoirdupois.

P. So long as these blemishes are retained in our system of weights and measures, it would be idle to expect that we can be ripe for any of the changes which have been suggested with a view to bring about uniformity of weights and measures throughout the world. Meanwhile, how do you suppose the merchants of different countries contrive to deal with one another, reckoning quantities of merchandize, as they do, in different weights and measures?

B. They make themselves acquainted with one another's unit standards, and by comparing these, they are prepared to reduce quantities expressed in one denomination into another, according to the nature of the transaction which they have in hand.

P. Would it not be very difficult to bring people throughout the world, or even throughout Europe, to surrender weights and measures to which they have been long accustomed, and to encounter the every-day inconvenience inseparable from the attempt, for the sake of establishing uniformity of

weights and measures in their comparatively small number of dealings with foreigners at a distance?

B. Very difficult. The principal hindrance to the substitution of improved methods of conducting business, whether in its great essentials or minor details, for the more cumbrous and inefficient, is to be found in the force of those habits which disincline people to listen to any appeals exclusively addressed to their understandings.

P. You are keenly alive, I perceive, to the importance of that master-habit which predisposes to shape conduct by a consideration of consequences. But as improvements do insinuate themselves and ultimately command, as it were, their acceptance, can you tell me how these feats are accomplished, if impressions are not made upon people's understandings?

B. The more striking improvements in production, such as the printing-press, the applications of steam-power, and of chemical and electrical agencies to the purposes of manufactures, farming, transport, communication, and gas and water supply, taken up in the beginning by a few, have been fraught with such prodigious benefits to those who have adopted them, through diminished cost of production, that resistance to their adoption was gradually overcome; and ultimately it died out. Acquiescence was hastened also by the greatly increased wages which attracted workmen qualified to serve the capitalists who first took up the improved methods. The universal adoption of one system of weights and measures would certainly effect a great saving of time and labour among people qualified to use it, but could hardly be appreciated by those who but just know how to deal with the weights and measures which are in daily use.

P. If the views of those who think that electric communication is capable of being brought within the reach of the masses of the people should be realized, would not the adoption of uniform weights and measures be a condition to be

attached to it almost as important as prepayment is to a penny-postage?

B. A common language as well as a common scale of weights and measures would materially assist a rapid and correct use of the telegraph, and thereby diminish costliness of communication. It is clear, before such a change, however desirable, can be brought about, that the inhabitants of each country must be sufficiently advanced to use a common language and a common system of weights and measures among themselves. They may then, but not till then, be prepared to feel their way to ascertain whether the lines of demarcation, the impediments to intercourse created by diverse systems of notation, cannot be broken through by the abandonment of many for the adoption of one.

P. Having once established a unit standard measure of weight, whether by balancing a given quantity of distilled water of a given temperature, or by some other process, has it been thought desirable to make the weights for general use out of any particular substance?

B. They are made of metal, the greater weights of iron and the lesser of brass and copper; metals being selected because their comparative indestructibility secures that the weights formed from them will remain unaltered, and because their weight in proportion to their bulk recommends them above most other commodities as handy for use and easily put aside for future use.

P. In considering the various contrivances and arrangements for facilitating interchange, we agreed that we ought to look upon them as aids for making labour more productive. The steady advance of man's capacity to produce and preserve wealth is one of the chief causes of the superior state of existence which he now enjoys compared with that of his forefathers. There is another measure, not exactly available in the interchange of commodities, but universally adopted in facilitating the engagements between employed and employers, servants and masters, borrowers and lenders, landlords and

tenants, in estimating the extent of service rendered and of labour performed, in regulating manufacturing processes, in determining the periods and seasons for agricultural operations, in making appointments for departure, arrival, and meeting, as occasion may require, in contributing to the success of what is intended by the chemist in his laboratory or by the cook in the kitchen: what measure is that?

B. The measure of time.

P. Our numerous public clocks, the clock in almost every house, the watch in the pocket, and the chronometer on board the ship, all bear testimony to the universality of the interest felt in the capability of determining with accuracy the length of the intervals between future acts appointed to be performed, between various phenomena and occurrences, between the beats of a pulse, the strokes of an engine, between seed-time and harvest, and between the various stages of existence in vegetable and animal life. The measures of which we have so far spoken differ in different countries; but the measure of time is the same in all. Languages differ, and therefore the measures of time, although the same in all countries, are expressed by different names. You are conversant with the names seconds, minutes, hours, days, weeks, months, and years. Which among all these has been fixed upon as the unit standard measure of time?

B. We know that sixty seconds make a minute, sixty minutes an hour, and twenty-four hours a day, and that 365 days make a year, with the exception of leap-year, which has 366 days; but which is the unit standard measure whence the others are derived we do not know.

P. As you can read the clock, and are sensible of the importance of keeping time, it would be a pity if you were shut out from the opportunity of learning on what principle clocks and other instruments for measuring time are constructed. Let me begin by ascertaining what you really do know about the different lengths of time which the names that you have mentioned stand for. What is a year?

B. A year is the interval of time which elapses while the earth is making one complete circuit round the sun, or, as it is sometimes expressed, the interval which elapses between the earth's departure from any point in its orbit and its return to that same point.

P. How is that interval expressed in days?

B. It cannot be expressed exactly in days. It is 365 days 5 hours 48 minutes 50 seconds.

P. What do you mean by a day?

B. Not a day as distinguished from night, but the whole interval comprised by one day and one night taken together.

P. Would that be a satisfactory account of what is meant by a day to people living within the Arctic and Antarctic circles?

B. No. But it will serve our purpose—the purpose of all but the few who do live there.

P. You will not object to have an expression for this interval which you say is made up in our part of the earth of one day and one night taken together, that will be accurate and applicable to all parts of the earth. You of course know the cause of the succession of day and night, or (to avoid using the word "day" in more senses than one) of light and darkness?

B. The rotation of the earth, owing to which the rays of the sun which can only fall upon that half of the earth which is turned towards it, light up different parts of the earth in succession.

P. You have read of the sun's coming to the meridian; do you know what is meant by that expression?

B. It seems to imply that the sun moves round the earth, rather than that the earth rotates. It signifies the sun's motion as inferred from a partial and false interpretation of appearances, rather than the earth's rotation which causes the sun's apparent motion. The interval between the sun's apparent departure from any meridian and return to it again, or the interval between noon and noon, is one rotation of the earth.

P. You are not far from the truth, but there is one circumstance which you have omitted to take into account. While the earth is rotating, does it remain fixed or stationary in space?

B. No; it is travelling in its orbit, that is, pursuing its course round the sun.

P. Must not this make some difference between a day and one exact rotation of the earth? I have led you into an inquiry for which you are not quite prepared. Your curiosity will be excited to study these subjects more minutely and accurately than it would be possible for us to do now. But I may set you upon making a comparison between what you have told me and what I will tell you. You told me that the year consists of about $365\frac{1}{4}$ days; and I tell you that the earth makes about $366\frac{1}{4}$ rotations in a year, that is, the number of rotations is one more than the number of days in a year. Before you attempt to trace the consequences of this difference between the number of the earth's rotations and the number of days in a year, let me ask,—Has it ever occurred to you how we should fare as to light and darkness if the earth did not rotate at all while it travelled round the sun?

B. As the earth moved round the sun, we, that is, the inhabitants of England, should have a gradual change from light to darkness, and back from darkness to light once a year.

P. And if the earth made one rotation in the course of a year?

B. One part of the earth would be constantly in darkness and another part in the light. We should have something like a succession of the seasons, but no succession of day and night.

P. And if the earth made five rotations during the year?

B. There would be five rotations and four days in the year.

P. How many rotations would the earth make at this rate before the sun returned to the same meridian?

B. One and a quarter; and in the same time it would have completed a fourth part of its course round the sun.

P. Rotating at its actual rate, or, omitting fractions, 366 times a year, how many rotations must the earth make before the sun returns to the same meridian?

B. $1\frac{1}{3\,6\,5}$ rotations; and if $1\frac{1}{3\,6\,5}$ rotations be multiplied by 365, the number of days in the year, we have 366 rotations.

P. It so happens that the name "day" is applied to one exact rotation of the earth, as also to $1\frac{1}{3\,6\,5}$ rotations. The first is called the sidereal, and the second the solar day. How much longer is the solar than the sidereal day?

B. $\frac{1}{3\,6\,5}$ part of a day, or about four minutes.

P. Adopting the language in general use, which seems framed upon the supposition that the stars and sun move, while the earth is at rest, the sidereal day is the interval which elapses before the same star returns to any particular meridian, and the solar day is the interval before the sun returns to the same meridian.

B. Does not this explanation overlook the fact that while the earth travels round the sun its position must be altered in regard to the stars?

P. This fact has not been overlooked. Attempts have been made to estimate what allowance, if any, ought to be made for it. I may mention that examination with the most powerful and delicate instruments has not led to the discovery of any appreciable difference in the apparent size of the stars when examined from points distant 190,000,000 miles from one another. If some slight variations have been suspected, or even ascertained of late years, the difference is too insignificant to modify any conclusions founded upon the assumption that the earth's position in regard to the stars is fixed. As the only means of getting at the distances of suns, planets, and stars is through the changes observable in their apparent sizes when viewed from different points the distance between which is known, astronomers hitherto have been able to ascertain thus much—the stars must be of enormous

size, to appear so large as they do; and their distance is incalculable, since no difference is observable in their apparent sizes when examined from points 190,000,000 miles apart.

B. We ought not henceforward to have any difficulty in understanding the difference between a solar and a sidereal day.

P. There is another circumstance which must not be left unnoticed. Although the earth's rotation is uniform, so that the length of the sidereal day is invariable, its progress in its orbit is more rapid at one period than at another. Will the length of the solar day be altered, according as the earth moves more quickly or more slowly?

B. The quicker the movement of the earth in its orbit, the greater must be the length of the solar day.

P. Does the solar day, as marked by the clock, vary in length like the solar day marked by the sun?

B. No. Accurate clocks mark seconds, minutes, hours, and hence days, of uniform length.

P. Clocks have been constructed so that 365 days of uniform length shall correspond with the sum of 365 days of unequal length. Can you tell how that has been managed?

B. By dividing the sum of 365 unequal days by 365; the quotient will give an average day.

P. That average day has been fixed upon as the unit standard measure of time. It goes by the name of the "mean solar day." Our clocks, watches, and chronometers are constructed to mark that precise interval, or, which amounts to the same thing, such fractional parts of that interval as are found best adapted to the purposes of daily life. The unit standard being once agreed upon, the measures for the fractional parts follow as a matter of course. You can tell me what they are.

B. The hour $= \frac{1}{24}$ of a mean solar day; the minute $= \frac{1}{60}$ of an hour; the second $= \frac{1}{60}$ of a minute. The only larger measure made up of multiples of days is the week, $= 7$ days. Our months are of different lengths; and the year, as already stated, is 365 days 5 hours 48 minutes and

50 seconds, and cannot, therefore, be exactly measured in days.

P. A year is one of those remarkable intervals of which it is desirable to retain a record. It is also desirable that the months and seasons of one year should correspond with months and seasons of the same name in other years. But it is convenient that each year should begin immediately after midnight of the 31st day of December. The year, therefore, must be made up of entire days. Do you know how the odd hours and minutes have been provided for, so that their accumulation, if disregarded, may not derange the order of the months and seasons?

B. The rough contrivance for preserving this order was to make every fourth year consist of 366 days, by adding one day to February. The years thus prolonged are called "leap years." But the exact measurements of modern times showed that the year by this arrangement was made on an average eleven minutes too long. Trifling as eleven minutes may appear, repeated 400 times they add up to three whole days; to neutralize which the fourth of each hundred years is alone made a leap year, the other three consisting of 365 days. In every 400 years we have 97 consisting of 366 days, and 303 of 365 days; and thus 400 years of whole days are brought to correspond with the same number of years, supposing each to measure 365 days 48 minutes 50 seconds.

P. I may congratulate you on understanding so well the principles on which our measurements of time have been arranged. You will, I dare say, follow them out with greater minuteness in your astronomical studies. There is another measure used in connection both with the measure of time and the measure of space. Your lessons in geography have made you acquainted with the terms "latitude" and "longitude"—what do they stand for?

B. Latitude is distance from the equator, north and south; and longitude is distance, east or west, from any meridian line adopted for the occasion.

P. And how are these distances measured?

B. Not in yards, or multiples of yards, but in degrees.

P. What is a degree?

B. A degree is the 360th part of the circumference of a circle; every circumference being supposed, for the purposes of measurement, to be divided into 360 equal parts or degrees.

P. Are not angles also measured in degrees and parts of degrees?

B. Yes, the apex of any angle may be made the centre of a circle; and the arc contained between its two sides gives the measure of the angle. Any number of lines or radii may be drawn from the centre of a circle to its circumference; and the sum of all the angles at the centre will be 360 degrees. An arc of 90° subtends a right angle; an arc of less than 90°, an acute angle; and an arc of more than 90°, an obtuse angle.

P. You are familiar with the lines drawn upon a terrestrial globe to assist you in your various computations. What is the name of that great circle which is equidistant from both poles?

B. The equator.

P. There are numerous circles parallel to the equator, approaching the poles, north and south: what are they?

B. Lines of latitude. These circles are smaller and smaller as they approach either pole, where they are represented by a dot or point.

P. What are those great circles passing through both poles and crossing the equator at right angles?

B. They are lines of longitude, or meridian lines.

P. On globes on which these lines are twenty-four in number, cutting the equator and every circle parallel to it at equal distances; how many degrees are contained between every two of these adjoining lines?

B. Fifteen degrees.

P. And as the earth makes one complete rotation each sidereal day, to what time does 15° longitude correspond?

B. To the twenty-fourth part of a sidereal day or to one sidereal hour. Each degree corresponds with four minutes of time.

P. Is there any connection between degrees and space similar to that which you have described between degrees and time?

B. That could not be, for degrees of longitude vary greatly in length, gradually diminishing as they approach the poles. Degrees of longitude on the equator and degrees of latitude being each the 360th part of a great circle, measure sixty-nine and a half miles.

P. Are degrees much used for purposes of measurement?

B. Yes; but we know very little about them. Angles are measured in degrees, and latitude and longitude also. As the earth rotates from west to east at the rate of a degree in every four minutes, when it is known by a chronometer what the hour of the day is at any particular place where the chronometer had been set, and it has been ascertained by an observation of the sun what the hour of the day is at the place where the observation is made, every four minutes of the difference between these two times is equivalent to the difference of a degree of longitude between the two places. The captain of a ship at sea will know that for every hour's difference between the time marked by the sun and the time marked by the chronometer, there are 15° of longitude between the position of his ship and the place whose time is marked by the chronometer—west, if the sun be after the chronometer; east, if the sun be before the chronometer. The altitude of the sun will give him his latitude; and the latitude and longitude together give him his place on the chart.

P. Can it be said that the contrivance for measuring degrees in combination with that for measuring time in any way facilitates interchange or production?

B. Not only can it be said, but it cannot be doubted. The navigator by its help is able to traverse the ocean as sure of every step of his progress as if he were on land;

and his voyages are thus made more speedily and more safely, one of the consequences of which is, that passengers and merchandize are transported at diminished cost.

P. There are other measures, such as the thermometer, or measure of heat, and the barometer, or measure of the weight of the air, which have uses so varied and interesting that not to understand the principle of their construction is to be deprived of much intellectual gratification, as well as to be cut off from powerful resources for the production and for the judicious application of wealth to the purposes of well-being. They cannot fairly be brought within the limits of the subjects on which I proposed to talk with you. But there is a measure more universally used than any of those which we have gone over—the measure of value. That we must reserve for separate and detailed examination. I will not, however, take leave of you here without recalling your attention to those qualities in men which you classified as good, and asking you whether the introduction of weights and measures inclines you to modify in any respect the classification which you have made?

B. We are only more deeply impressed than before with the importance of cultivating those qualities in childhood and youth, so that they may flourish in manhood. Intelligence and skill of a high order are required to turn contrivances for facilitating interchange to the best account; and honesty, accuracy, and circumspection, are not to be dispensed with in those who are to be trusted with the use of them. The visits of inspectors may be safeguards against flagrant dishonesty and carelessness, but to derive the full benefit from the aids to productiveness placed within our reach, we require a prevalence of intelligence and honesty not only in tradesmen, but in the inspectors who supervise tradesmen. We may rely upon inspectors as upon policemen, to keep dishonesty in check; but we must look to the teachers and trainers of the young to cultivate the intelligence and honesty which will warrant our expecting good conduct.

ON MONEY.

P. THERE is yet another contrivance for facilitating interchange which has been repeatedly adverted to in our conversations, which, even had we wished to ignore it, would have forced itself upon our notice, and which—although the qualifications for understanding it were unattainable except through the intermediate investigations just completed—I could not but touch upon while I requested you to mark it as a subject not omitted, but simply reserved for future consideration. You perceive that when you go into a shop to procure commodities, the weights and measures in use enable you at once to come to an understanding with the shopman concerning the quantities of them that you would have. There is another thought, however, is there not, in the mind of you both?

B. Yes, the quantity of money which is to pass from us to him in exchange for his commodities.

P. If you and he are not already aware of that through previous dealings, how do you ascertain it?

B. By asking the price which he puts upon the commodities which we are thinking of buying.

P. In making use of the word "buying," are you not introducing a new word in the place of "exchanging"?

B. When, in making exchanges, one of the commodities is money, the person who parts with the money is called a "buyer," and the person who receives it is called a "seller," and "to buy" and "to sell" are substituted for "to exchange."

P. Does the use of money supersede exchange ?

B. No. The use of money facilitates exchange. For that reason money is called a medium of exchange. There would be no exaggeration in saying that it enables a hundred exchanges to take place for one that would take place without it. Money is quite as effective in distributing commodities as the iron-pipes in our streets are in distributing water and gas.

P. I rejoice that you should have a vivid impression of the immensity of the advantages secured to us by the use of money as a medium of exchange; but, at present, let us not allow our attention to wander from the examination of these advantages, what they really are, and how they are to be enjoyed free from danger, lest through any oversight we should be obliged to revert to your pipes for illustrations of damages similar to those from floods and explosions arising out of defective arrangements and workmanship. Might any commodity be used as a medium of exchange ?

B. Yes; but not with equal advantage. Some, such as liquids, fruit, and grease, could scarcely facilitate interchange. Perishable commodities must not be used as money where general convenience is the object.

P. Passing over commodities that are perishable, as evidently unfit, would all others be serviceable ?

B. No. Those the values of which are small as compared with their bulk and weight must be excluded. The use of them as money would impose upon buyers the necessity of carrying about with them loads scarcely bearable. If iron were to be used, the four-pound loaf of bread would not be purchasable with less than from ten to twenty pounds of iron. Many other metals, whose value is greater in proportion to their bulk and weight, are still too cumbrous for a medium of exchange. These thoughts have led to a very general adoption of gold and silver as the material out of which to make money.

P. Excluding from among commodities those that are

perishable and those that are bulky and heavy in proportion to their value, does it matter which of the others we fix upon to use as money ?

B. There are two properties which ought to be possessed by the material out of which it is attempted to construct a medium of exchange, so desirable as to be almost indispensable. It ought to be of uniform quality, and susceptible of being divided and subdivided without detracting from its value. Indigo, wool, cotton, silk, flax, and the fabrics made from them, diamonds, pearls, and precious stones,—all fail in one, and some in both, of these requisites.

P. Some such reasons as these must have led to the general adoption of gold and silver as the commodities out of which to make a medium of exchange. You may as well enumerate all the qualities inherent in these metals that fit them so peculiarly for the purpose ?

B. Their value is great compared with their bulk and weight; they are durable ; they can be divided and subdivided, each part retaining the same value, in proportion to the value of the undivided whole, that its weight does to the weight of the whole; and all the parts admit of being brought to a common standard of fineness.

P. In some countries both these metals are converted into money. In others, they confine themselves to the use of one. Our inquiry shall now be concerning the monetary arrangements in our own country—what they are; and, incidentally, why they should have been adopted in preference to others. Some of my questions will be directed to the reasons of things, and some to matters of fact. The first will set you thinking; the latter will set you remembering what you have learned, and stating what you know and what you do not know. And where there is not one among you who can tell me what you ought to know before we separate, then I will tell you. You know, I dare say, the name of the unit standard measure of value which has been established in this country ?

B. The sovereign or pound sterling.

P. Can you tell me anything about this sovereign ?

B. It is a gold coin ; but the gold of which it is made is not pure gold. It is a combination of gold and copper melted together in the proportion of eleven ounces of pure gold to one ounce of copper. The copper thus combined with gold is called "alloy ;" and the gold alloyed with copper in this proportion is said to be gold of the Mint standard of fineness. 40 lbs. troy weight of this gold is cut up into 1,869 pieces of uniform weight, and each piece, when coined, is called a sovereign.

P. What induces you to fix upon this weight of 40 lbs. to cut up into sovereigns ?

B. It is the smallest number of lbs. that we could take capable of being cut up into whole sovereigns without a remainder. We might have taken 160 ozs. which admit of being cut up into 623 sovereigns. 20 lbs., as you can see, might be coined into $934\frac{1}{2}$ sovereigns, and 80 ozs. might be coined into $311\frac{1}{2}$ sovereigns; but neither could be coined into whole sovereigns without a remnant. Reduced to the equivalent in money, for 1 lb. we should have 46*l.* 14*s.* 6*d.*, and for 1 ounce, 3*l.* 17*s.* $10\frac{1}{2}d.$

P. What is the weight of a sovereign ?

B. $123\frac{1}{4}$ grains.

P. The work of coining is conducted at the Mint, which is a Government establishment, and the public may take their gold there and get it converted into coin, at the rate of 3*l.* 17*s.* $10\frac{1}{2}d.$ per ounce, free of charge. With the coinage so conducted, what is the difference in value between two parcels of gold of the Mint standard of fineness and of the same weight, one uncoined, and the other coined ?

B. None at all, unless something would be paid by a proprietor of uncoined gold to avoid the trouble of taking it to the Mint, and the loss of the use of it while it was going through the process of coining.

P. I may tell you that the Government have made an arrangement with the Bank of England, the nature of whose

business compels them to have in their possession at all times a large stock of coined gold, by which the public, if so disposed, have the option of demanding gold ready coined for their uncoined gold, at the rate of 3*l.* 17*s.* 9*d.* per ounce, paying, in fact, for the convenience afforded them, at the rate of 1½*d.* per ounce, or of 3*s.* 4*d.* per cent., or three sovereigns out of 1,869, or one sovereign out of 623. Leaving this trifle out of consideration, what shall we say of the values of equal weights of coined and uncoined gold?

B. That they are the same.

P. The importer of gold is seldom obliged to submit to this deduction of 3*s.* 4*d.* per cent., trifling as it is. A small part, only, of our imported gold is required to be turned into additional coin. There are, generally, merchants and dealers desirous of obtaining gold for purposes of manufacture or for sending abroad, uncoined being as suitable as coined for them. What might they do in order to obtain gold at a less rate than 3*l.* 17*s.* 10½*d.* per ounce?

B. They might offer to importers something between 3*l.* 17*s.* 10½*d.* and 3*l.* 17*s.* 9*d.* per ounce, and thus induce the importers to sell to them rather than to the Bank of England.

P. Transactions of this kind are of frequent occurrence. Hence, coined and uncoined gold may be said to be of the same value, without suppressing even so much as 3*s.* 4*d.* per cent. Is there anything else that remains to be noted concerning the sovereign?

B. Nothing that we can think of; for we need not mention its shape, and the stamp upon it. They are known to everybody.

P. We have cognizance of its weight and fineness, of its shape and stamp, and of its correspondence in value with the same weight of uncoined gold: but what is that value?

B. That question is meant to put us off our guard—to puzzle us—to confuse us—to lure us into forgetfulness of what we have learned about values. We have already said that values vary,

that they fluctuate. We cannot, therefore, tell you the value of a sovereign, unless you tell us the time at which and the commodity in which you would have its value estimated.

P. Are you quite sure that its value has not been fixed by law?

B. We cannot say that such an attempt may not have been made; but we know that the attempt could not be successful, since values cannot be fixed.

P. Nevertheless, I have been told, in answer to the question just put to you, that its value is fixed, and what that value is —viz. 20*s.*

B. But we should have been dull and careless to give such an answer after our lesson on the yard measure.

P. Since you are quite fortified on that point, let us pursue our inquiries into some other particulars concerning our coinage. Do sovereigns, unaided by coins of other denominations, serve the purpose of measuring the values of the quantities of commodities most commonly bought and sold in the daily business of life?

B. No; and we have other coins to mark smaller values than a sovereign can be used for. Among these is the half-sovereign, weighing, as its name seems to imply, half as much as a sovereign. Coins of much less value than that are in daily use, but they are not made of gold.

P. Will you mention some of the other coins which have been provided to measure values smaller than a half-sovereign?

B. There are several, but the principal are the shilling and the penny; the first made of silver, the second of copper. These, with the sovereign, make the £ *s.* *d.* of our accounts.

P. What is a shilling?

B. The $\frac{1}{20}$ of a £ or of a sovereign.

P. As the shilling is a silver coin, and as the value of silver fluctuates, how can a shilling be invariably $\frac{1}{20}$ of a sovereign?

B. We know that it is so. We can always obtain change

for a sovereign at that rate; and people, who have more shillings than they need for their smaller payments, find no difficulty in exchanging them for sovereigns, at the rate of 20 to a £.

P. Do you think you will be the worse for knowing why the shilling made of silver is always $\frac{1}{20}$ of a sovereign made of gold, besides knowing that it is so, and for learning, in addition, whether anything could possibly arise to disturb the peaceful circulation of sovereigns and shillings as now coined? But tell me, first, why should not the shilling be made of gold, and then disturbance would be impossible?

B. A shilling of gold would weigh the twentieth part of 123 grains, or 6 grains; and be, therefore, much too small to admit of being conveniently used as money.

P. The object of those who contrived our silver coins must have been to combine the convenience of larger bulk, with values, in proportion to the sovereign, as invariable as if the coins were all made of gold. Can you tell me anything more about the shilling? By carefully examining what we know, we may be led to the discovery of the means by which the shilling has been hitherto and may be henceforward maintained of the invariable value of $\frac{1}{20}$ of a sovereign.

B. The silver of which it is made is alloyed with copper, not quite in the same proportion as that in which gold is alloyed. In every twelve ounces of silver of the Mint standard, there are only 18 dwt. of copper, and 11 oz. 2 dwt. of pure silver.

P. What is the weight of the shilling?

B. One ounce of silver is coined into five shillings and sixpence, or two ounces into eleven shillings. Hence a shilling weighs $\frac{2}{11}$ oz., or 87 grains.

P. Will the Mint or the Bank of England take silver in the same way as they will gold from all who bring it, and return the same weight of silver coined?

B. No. Silver coin can only be obtained from the Mint by purchase: which means, by giving gold coin in exchange

for it, at the rate of eleven sovereigns for every 40 ounces of coined silver, or of 5*s.* 6*d.* per oz.

P. How does the Master of the Mint procure the silver to meet the demands of the public for silver coin?

B. By buying it. And as the price of silver has fluctuated for these last forty years between 4*s.* 11*d.* and 5*s.* 3*d.* per oz., the advantage to the Mint has been between 7*d.* and 3*d.* for every ounce of silver coined, which goes part of the way towards paying its expenses.

P. Might it not be expected that the Mint would be more ready to coin silver, from which this advantage is obtained, than gold which yields none?

B. The regulations under which the Mint is conducted being made to supply the wants and to suit the convenience of the public, and not to yield profit to the Mint, the obligation of coining gold free of charge is imposed upon it. But the public are protected against having an inconvenient quantity of silver coin forced upon them, because creditors are not compelled to accept payment in silver of any debt owing to them of a larger amount than 40*s.* The law has pronounced that all debts above 40*s.* must be, at least partially, paid in gold, if insisted upon by the creditors. Adopting the language in common use, gold is a legal tender to any amount, silver to the amount of 40*s.* only.

P. Can you explain why this distinction between gold and silver should have been made?

B. It was open to choose between these two metals, they being the two best fitted to serve the purposes of money. Gold was fixed upon as being the best adapted to represent large value in comparatively small bulk and weight; but silver has been made to represent gold in measuring small values as being better adapted for the purpose, arming the public with the right of resisting any attempt to deprive them of the superior convenience of gold for the measurement of larger values.

P. Does it appear to you that the public are secured

against the inconveniences both of a deficient and of an excessive supply of silver coin?

B. An adequate supply of silver coin may be considered sure, for the Mint is always ready to coin; and no proprietor of silver coin would think of melting it or of turning 5*s.* 6*d.* into less than 5*s.* 2*d.*; and an inconveniently large supply is not to be dreaded, because the public are entitled to refuse accepting any larger sum than 40*s.* in silver.

P. Since our coinage has been established on its present basis, the extreme fluctuation in the price of silver has been between 4*s.* 11*d.* and 5*s.* 3*d.* per oz.; but is it not possible that a greater fluctuation might make it necessary to diminish the weight of silver in the shilling?

B. It is certainly possible, but not probable. Were the necessity to occur, it would be a matter of little moment.

P. Is not the reducing the weight or the debasing of the current coin considered a very bad act by all intelligent people?

B. Yes, and rightly; but to reduce the weight of the shilling, provided that the smaller weight continued to represent the twentieth part of a sovereign, would be no debasement of our money, which is gold; the silver and copper coins being but tokens or contrivances for representing those fractional parts of a sovereign which would be inconveniently small as gold.

P. But you have not explained how it might possibly be necessary to reduce the weight of the shilling.

B. The price of silver might rise above 5*s.* 6*d.* per oz., say to 6*s.* or upwards. The Mint would then lose where they now gain. They would buy an ounce of silver for 6*s.* and coin it into no more than 5*s.* 6*d.*, unless they reduced the weight of the shilling.

P. Would there be any other harm besides that of the loss to the Mint, that is, to society, if the weight of the shilling were not reduced?

B. The silver coin would disappear. It would be melted

as fast as it was coined, because the silver in 5*s.* 6*d.* would be worth 6*s.* The only silver coin in circulation would be that which had been worn down so that 6*s.* weighed no more, or less, than one ounce.

P. What circumstances could possibly make the price of silver rise above 5*s.* 6*d.* per oz.?

B. Circumstances similar to those which have caused it to rise from 4*s.* 11*d.* to 5*s.* 3*d.* per oz. A very large and continuous increase in the annual produce of gold unaccompanied by any corresponding increase of the quantity of silver would tend to lower the value of gold as measured in silver, or, which is the same thing, to raise the price of silver.

P. Is it likely that there ever will be any very great fluctuations in the relative values of gold and silver?

B. Judging from what we have seen hitherto, we might say—No. The discovery of the gold-fields in California, followed, and quickly too, by the discovery of those in Australia, large as has been the increase in the annual produce of gold therefrom, has occasioned only the small rise in the price of silver so far noticed. In fact, the price of silver has of late fallen back to less than 5*s.* 1*d.* per oz. When we bear in mind how small even the large annual produce of late years is in comparison with the whole stock of those metals accumulated among us, the smallness of the fluctuation in their relative values ceases to surprise us.

P. You perceive nothing in our monetary arrangements so far that exposes them to any disturbance. If, contrary to expectation, the fall in the value of gold, as measured in silver, were to continue till the price of silver rose above 5*s.* 6*d.* per oz., the maintenance of silver coin in circulation would be easily accomplished by making a smaller weight of silver perform the function of representing the twentieth part of a sovereign. Let us now pass on to the penny. What can you tell me about that?

B. A penny is the 240th part of a sovereign, = about half a grain of gold, and if made of silver would be seven

grains of that metal; both too small for use as money. A metal of far greater bulk and weight in proportion to its value, copper, has been adopted, out of which to coin pence, halfpence, and farthings.

P. What are the contrivances by which the copper penny is made uniformly to represent $\frac{1}{240}$ of a pound, or a half-grain of gold, while the price of copper has fluctuated from 90*l.* to 120*l.* per ton?

B. The weight of our present copper coin is 23 pence = one pound avoirdupois; or 51,520 pence = 214*l.* 13*s.* 4*d.* are coined out of a ton of copper. The profit from the coinage is a security to the public that there will be no reluctance to keep them supplied with a sufficiency of money capable of acting as a medium of exchange for small values. And as copper coin is constituted a legal tender only to the extent of 12*d.* = one shilling, people are secure against being annoyed by an inconvenient weight in the form of money. There is also some security against the destruction of the coin in the fact that the copper in a penny is not worth more than a halfpenny.

P. You all remember the dreadful shipwreck of the *Royal Charter* steam-vessel. She had on board a large quantity of sovereigns, most of which were saved, but many of them so smashed, broken, and beaten about as to be scarcely recognizable. Suppose there had been similar values of shillings and pence on board, and recovered from the wreck also so much defaced as to be unserviceable as money: what would be the respective values of 100*l.* in defaced sovereigns, 100*l.* in defaced shillings, and 100*l.* in defaced pence, assuming the exact weights of each to have been brought up from the bottom of the sea?

B. 100*l.* of defaced sovereigns would be worth 100*l.*; 100*l.* of defaced shillings would be worth about 93*l.*; 100*l.* of defaced pence would be worth about 50*l.*; although all alike in value, had they been preserved as money.

P. You have seen some of the pence and halfpence that

have been lately coined to replace the copper pence of which you have been speaking. It is a work of considerable time to supply the new coin in quantities sufficient to admit of the other being entirely withdrawn from circulation. The representative of our half-grain of gold is to be changed. Taking some little credit to ourselves for intelligence, this change is being made under the supposition that it is for the better. The new pence, and halfpence, and farthings are, as you know, made of bronze and are smaller and lighter than the old, and yet large enough for convenient use. What do you think of the change ?

B. We greatly prefer the new coin. We consider the change a great improvement. When we are fully supplied, we shall be quit of the unpleasant smell attaching to copper, we shall have less weight to carry about, and the improvement will be obtained at little or no cost, as the value of the copper saved by diminishing the weight of the penny will, we are told, nearly pay the expense of the new coinage.

P. After noting these particulars, and many more might be noted, concerning the coin in circulation, we ought not to allow our attention to be distracted from the fact that $123\frac{1}{4}$ grains of gold of the Mint standard of fineness has been adopted as our unit standard measure of value. Our other coins, not golden, are only used as warrants, or certificates, or tokens that the holders of them are entitled to the fractional part of a sovereign expressed upon each of them. They might be made of paper or wood. They are made as they are, because silver, copper, and bronze have been thought preferable to paper, wood, or any other substance. I will ask you to describe to me, if only for my satisfaction, our system of money of account, as if we had nothing but gold of the Mint standard of fineness, and omitting fractions.

B. We have the sovereign or £ = 123 grains; the shilling or *s.* = 6 grains; the penny or *d.* = $\frac{1}{2}$ grain.

P. May we consider that the other particulars which we

have gone over together are of little importance towards understanding our monetary system?

B. Of very little except to persons whose business it may be to direct our coinage, beyond the satisfaction of understanding in all its details matters that we are handling every day of our lives. The essential in regard to our money, as in regard to weights and measures, is to be thoroughly acquainted with our unit standard, which is a sovereign or 123¼ grains of gold, and that although gold is not used for smaller values than half-sovereigns, the silver, copper, and bronze used in its place are representatives merely of the weight of the gold which would be used if that weight were not too small in bulk to be conveniently usable as money. There are also contrivances in use for avoiding the inconvenience of very large weights as well as of very small weights of gold. Bank-notes are used in this way.

P. You are right. But you have much to learn before you will be prepared to enter upon the subject of bank-notes or paper-money. You have correctly described one of the purposes of bank-notes. While reserving this subject for future examination, we may prepare ourselves for another illustration of the means by which a commodity of small value may be employed to represent, may be made to act as an exact equivalent for, larger values. Weights of silver, copper, and bronze, in themselves less valuable, are made to represent faithfully fractional parts of a sovereign; and a piece of paper, which figuratively may be said to be of no value, and accurately to be of less value than a farthing, is made to represent 1,000 sovereigns. As we are but one in the great community of nations, can you tell me anything about the moneys of other countries?

B. We fear that our knowledge extends but little beyond the names of some of the coins which are current abroad, such as francs, napoleons, dollars, florins, and roubles.

P. While the moneys of other countries differ from our own in many respects, they all agree so far that a unit standard

measure of value has been adopted in each. Perhaps it would be safer to say that it has been intended to adopt a unit standard measure of value. And all thoughts of using any other metals than gold and silver for the purpose have been discarded. Some, like ourselves, have adopted gold, some silver, and others have adopted both gold and silver, not with the thought of having two standards, but leaving it optional with the debtor to pay in gold or silver, or in both. Let us try and compare the merits of these different systems. And first as between gold and silver?

B. The unit standard measure of silver, supposing no gold coin to be in circulation, and no substitute for coin to be used, necessitates the carrying about a weight fifteen times as great as would be required if gold were used. As gold serves the purpose of coin equally in all other respects, and better in this, we incline to give it the preference.

P. The option of two standards, or, as it may be represented, of two metals for one standard, is next to be considered. The principle involved in it, not the details, need alone occupy us here. Avoiding small fractions, we may say that the relative values of equal weights of gold and silver have fluctuated since the discovery of the Californian gold-fields between 1 gold = 16 silver and 1 gold = 15 silver. In the midst of these fluctuations, two countries, A and F, have each had a double standard. In A it was optional to pay one ounce of gold or 16 ounces of silver; in F, to pay one ounce of gold or $15\frac{1}{2}$ ounces of silver. At the commencement of this period, when the relative values of the two metals were 1 gold = 16 silver, which of the two metals would be likely to have been selected by debtors in A for the discharge of their debts?

B. It would have been a matter of indifference; and holders of gold and silver would equally take them to the Mint to be coined and discharge their debts in both or either.

P. And which would have been selected by debtors in F?

B. Silver. The holder of an ounce of gold would never have thought of discharging his debt in gold. He would

have exchanged his ounce of gold for 16 ounces of silver, with $15\frac{1}{2}$ of which he would have paid his debt, retaining the other half-ounce of silver for himself.

P. After the discovery of the Californian gold-fields, when the ounce of gold had become worth no more than $15\frac{1}{2}$ ounces of silver, what do you think will have occurred in A?

B. Either the silver coin will have disappeared, to the great inconvenience of the inhabitants thus deprived of coin except copper to serve as a medium of exchange for small values, or their monetary laws will have been revised so as to retain silver coin in circulation.

P. Are you quite sure that silver coin must disappear under such circumstances?

B. It could not be otherwise; for the debtor possessed of 16 ounces of silver, coined or uncoined, would avail himself of the option which the law gave to him. He would sell $15\frac{1}{2}$ ounces of his silver for an ounce of gold wherewith to discharge his debt, and remain possessed of one-half ounce of silver by this very ordinary exercise of intelligence. The possessor of gold and silver uncoined would send in the first alone to be coined at the Mint; and the possessor of gold and silver coined would use the first as coin with which to pay debts, and the second as merchandize.

P. If for A you substitute America (United States), something like this has actually taken place. First, from the slight decline in the value of gold as measured in silver, the silver coin gradually disappeared, and then the monetary laws were altered, making the gold dollar the unit standard measure of value. Silver is no longer used, except for subsidiary coins, keeping the weights of each sufficiently small to insure that the coined silver shall be more valuable than the same weight of silver uncoined, and thereby depriving the holders of any disposition to melt or dis-coin it. Next what do you think will have occurred in F?

B. When the value of gold declined till 1 ounce was worth no more than $15\frac{1}{2}$ oz., debtors would have been indifferent

whether they paid in gold or silver. As the value of gold gradually declined, say, till 1 oz. gold = 15 oz. silver, debtors in possession of 15½ oz. of silver coin, instead of paying their debts with it, would have used it as merchandize. With 15 oz. of silver, they would have procured one ounce of gold, which would equally well discharge their debt, and leave them possessed of a half-ounce of silver. By this process, a circulation of silver coin exclusively would become one of silver and gold mixed; and if the values of the ounce of gold, instead of fluctuating between 15½ and 15 oz. of silver, were to fall permanently, so that the fluctuations were between 15 and 14 oz. of silver for 1 oz. of gold, the silver coin would disappear.

P. If for F you substitute France, you have described what has taken place there of late years. Before the Californian era, the money in circulation there was silver; the people who chose to indulge in the luxury of gold coin paying a premium for it; but for which premium gold would not have been taken to the Mint to be coined, or, if coined, would have been speedily melted. Since that era, the gold coin has been superseding the silver, although not yet to such an extent as to cause inconvenience. The future course of the Government there, doubtless, awaits the further progress of the fluctuations in the relative values of the two metals. If you were invited to give an opinion, what would you suggest?

B. The following of the example set in the United States. To make of silver a token coin—a representative of a given weight of gold, of more value coined than uncoined, and to allow it to be a legal tender to a limited amount only.

P. I may now congratulate you on two things—on being acquainted with the coins of your country, and with the principles on which the arrangements of every monetary system must be based, whatever the commodities out of which the money may be made. The adoption of money as a measure of value has introduced a new word—price, expres-

sive of value measured in money. You must learn to use this word readily, and yet safely. We have said that values fluctuate in compliance with the fluctuations of supply and demand. May we say the same of prices?

B. Certainly; price being nothing more in this country than value measured in gold. If the price of wheat, for example, were to rise from 2*l.* to 4*l.* per quarter, the value of gold measured in wheat would fall one-half, and the value of wheat measured in gold would be doubled.

P. When the price of wheat rises or falls, should we look for the cause in something affecting the supply and demand of wheat, or in something affecting the supply and demand of gold?

B. We ought not to omit bearing both in mind, but the cause of fluctuation is more likely to be found in the wheat.

P. Why so?

B. Because wheat is exposed to be influenced by vicissitudes of weather, while gold is not; and because the annual produce of wheat bears a large proportion to the stock on hand at the approach of harvest, while the annual produce of gold is small compared with the stock on hand.

P. In cases of fluctuations of price, would you always look for the cause of fluctuation in something affecting the supply and demand of the commodities whose prices had fluctuated, without regard to any alteration in the supply of gold?

B. Not always, but generally, because few commodities besides gold and silver are in large quantities compared with the annual produce. And as regards fluctuations in the price of silver, we know the extent of the fluctuations that have occurred subsequently to the unlooked-for influx of Californian and Australian gold.

P. When you are referring to commodities, the supply of which is large compared with the annual produce, ought houses to be excluded?

B. Certainly not altogether; but it must be borne in mind that the prices of houses are exposed to one cause of fluctuation from which the prices of other commodities are

exempt. Corn, cotton, sugar, and tea, not to mention other commodities, admit of being moved from place to place, so that an excess of supply in one place is readily brought to meet a deficiency in another. Whereas, houses being immovable, it is just possible that houses might fall greatly in price in one place, while an increasing demand in another, which no activity of producing power could supply, might be accompanied by an increasing price.

P. In tracing fluctuations of prices to their causes, would it be as safe to omit noticing fluctuations in the supply of gold when the periods under consideration are remote from one another, as when they are near—when the prices are those of two succeeding centuries, as when they are the prices of two succeeding years?

B. No; because an increased annual produce of gold, equal, we will say, to raise prices to the extent of 1 per cent., would be inappreciable as between the prices of two succeeding years; while at the end of fifty years, it would be equal to 50 per cent.

P. In comparing the prices of different periods, how can we hope to form a safe opinion as to whether fluctuations in them are attributable to fluctuations in the supply of gold?

B. We must first take average prices for a sufficient length of time to eliminate extraordinary seasons and other exceptional circumstances; and then, if the fluctuations of prices as regards all commodities were general and in the same direction, it might fairly be suspected that the supply of gold as compared with the supply of other commodities had been considerably affected; but if the fluctuations of prices were not general, nor in the same direction, there would be no reason for suspecting that the supply of gold had undergone any change worthy of note.

P. Can you think of any circumstances that might possibly prevent an eventual rise of general prices, with a steady continuance of the present rate of annual produce from the gold-fields?

B. An equally steady increase in the production of all other commodities, accompanied, as such increase generally will be, by an increase of population similar to what has been observed in this country, in the United States of America, and in many other countries.

P. The smallness of the uprising of prices observable since the discovery and influx of the Californian and Australian gold, may be accounted for, partly by the largeness of the stock of the precious metals to which this unlooked-for addition was made, and partly by the rapid development of producing power directed upon all other commodities since the opening of this century. What might have been expected had not the new gold-fields been discovered?

B. A range of prices steadily subsiding—the consequence of the steadily increasing production, accumulation, and interchange of commodities, without any corresponding increase of the quantity of money or of the metal out of which money is coined.

P. Has not this unlooked-for discovery of gold saved us from a great inconvenience, or, perhaps, as you may have heard it spoken of, from a great calamity—a scarcity of money?

B. We have seen how inconvenience might fall upon a people from defective mint-arrangements, or from want of readiness in applying an adequate counterpoise to a disturbance in the price of the metal out of which the subordinate pieces of money or tokens were coined; but we do not see how there can be a scarcity of money when the mint is always accessible to those who wish to have their gold coined.

P. But how would it avail that the mint was accessible, if there were few persons possessed of gold, and that in very small quantities, to take there? Do you maintain, if the wealth and population of the commercial world were doubled, without any increase in the quantity of gold, that there would be no hindrance to the buying and selling of those larger quantities of commodities?

B. You are trying to mislead us. The only effect of a stationary supply of gold concurrent with a twofold supply of other commodities would be a subsidence to a lower range of prices; if to one-half of previous prices, each sovereign, each shilling, and each penny would serve as a medium of exchange for double the quantity of commodities. Hence the increased quantity of commodities would be as easily bought and sold by a smaller as by a larger supply of gold.

P. I am glad that you are able to see through this form of the scarcity-of-money fallacy. In due time you will see through some more complicated forms in which it may be attempted to impose the same fallacy upon you. Having mastered principles, you will not easily be led to abandon them because you may be at a loss to trace their action amid all the concurrent and antagonistic forces, partly known and partly hidden, that are influencing supply and demand. The experienced investigator knows how to suspend his judgment while searching for evidence. He considers principles previously accepted as on their trial. He is not tempted to surrender them when first brought in contact with a phenomenon which he cannot interpret by them, nor to cling to them convulsively when the evidence sought for has been found to modify or to disprove them. The difficulty of tracing effects while we know that causes are in action, or of tracing causes, the effects of which are unmistakable, is familiar to all observers and students, especially when the causes are remote, or weak, or concealed, or partially and covertly counteracted by other causes. Let me ask, would you undertake to detect that a thimbleful of water had been taken out of a cistern, or a handful of hay from a large waggon-load?

B. No.

P. Should you have any doubt whether the repetition of such acts would empty the cistern or demolish the waggon-load?

B. There could be no doubt.

P. If, while the thimble and the furtive hand were covertly, but steadily, at work, water was being poured in and hay piled on occasionally, but not in sufficient quantities to counterbalance the abstractions, what would you expect?

B. That the water and the hay would eventually disappear.

P. And if, while these minor abstractions were being made secretly, the bucket and the hay-fork were working openly and vigorously in the same direction?

B. The thimble and furtive hand would lend their aid, although unperceived, to empty the cistern and the waggon.

P. If the quantity of sugar, or tea, or of any other commodity, were doubled or trebled, what effect would that have upon the prices of those commodities?

B. To lower them.

P. Sliding down gradually from a large increase like one of these, could you fix when the increase would be so small as to cease to produce some effect in lowering prices?

B. No: we could only confess our inability to trace the effect of the increase as it was gradually made smaller and smaller.

P. Suppose, simultaneously with a small increase of supply, the price of the commodity rose?

B. We should be sure that some cause or causes, although unobserved by us, were overpowering that which by itself could only be the cause of a fall of price.

P. At your age, much of the knowledge requisite for your future guidance must be wanting; so, also, many of the fallacies and mistakes which assume the form and occupy the place of knowledge must be unknown to you. But whether it be knowledge, or whether it be fallacy, I ought to apprise you that abundance of money is by many considered a great blessing, and scarcity of money a terrible calamity. Much of the prosperity which we have enjoyed of late years has even been attributed to the discovery of the Californian and Australian gold-fields. To you the quantity of money seems a

matter of indifference, especially seeing that we are tolerably secure against any such variations of quantity as are likely to produce an inconvenient disturbance of prices. How do you account for the prevalence of an opinion so greatly at variance with your own?

B. You will not think us presumptuous if we say, that it probably arises from the circumstance that there are many people who have not given systematic attention to the subject under such experienced guidance as we have been favoured with.

P. But cannot you imagine what may have given rise to such an opinion?

B. Such an opinion may have arisen somewhat in this way. After the introduction of division of labour, interchange and the use of money; as the last operation in producing is to sell, so the first in consuming is to buy. People, accordingly, whose thoughts never carry them beyond proximate causes, say of those who cannot buy as much as they need, that they are suffering from want of money; of those who can buy without stint, that they enjoy plenty of money; and they speak in the same way, of those who cannot and of those who can discharge the debts which they have contracted. The state of distress or ease in which buyers and debtors feel themselves to be is communicated to sellers and creditors, who are said to suffer or thrive from the scarcity or abundance of money in the possession of their customers and debtors.

P. As you cannot deny the reality of the two states of distress and ease just depicted, to what do you attribute them, if the scarcity or abundance of money do not account for them to your satisfaction?

B. A state of distress, as we have already agreed, is attributable to want of wealth—to insufficiency of wages and profit, arising, in most cases, from want of industry, of intelligence, of economy, of probity, or of some or all of the industrial qualities indispensable to well-being. The prevalence of these qualities, where the quantity of money is

small, will place abundance of wealth at the disposal of all who possess them, concurrently with a low range of prices. The deficiency of these qualities, even where the quantity of money is large, will cause an adequate supply of wealth to be beyond the reach of those who are deficient in them, concurrently with a high range of prices.

P. Do you think that you have obtained sufficient insight into money-making and money-using to settle whether those practices, those modes of acting, ought to be classed under the head of good or of bad conduct?

B. We think we have. We cannot conceive how there can be any doubt that they must be classed among good practices.

P. When you pass a judgment, or, as it is sometimes loosely expressed, put forth an opinion, you must be prepared to meet with two kinds of objectors—one of those who will put you to the proof of the judgments which you pronounce, the other of those who will oppose you with counter-assertions utterly at variance with your own. Allow me to act as representative of the first, and to ask you on what grounds you affirm so confidently that to make and to use money is to act well?

B. We do not say that all people who make and use money are acting well—that they may not be acting ill; but they will not be acting ill because they make and use money. To make money is to make a medium of exchange, to make something which facilitates interchange, and which, therefore, makes industry more productive, and tends to increase the store of wealth, the insufficiency of which occasions so much privation and suffering.

P. I will not undertake to represent the second class of objectors that you will be sure to meet with, but I will try to put you in possession of some of the counter-statements which you ought to be prepared to encounter. If not directly, they indirectly pronounce your statements to be untenable. You will hear money-making denounced as low

and disreputable, and forms of expression indicative of contempt and loathing—such as money-grubbers, dollar-hunters, lovers of money, of filthy lucre, and the like—applied to individuals engaged in trade. I think you will agree with me, that such epithets are scarcely reconcilable with your eulogiums on money making and using.

B. Money-making is evidently used here for money-earning ; and we can hardly suppose that people who indulge in such undiscriminating denunciations really mean what their words express in their literal signification. They use figurative expressions which, although, perhaps, aimed at special objects not undeserving of censure, are so ill adapted for their purpose as to inflict wounds in all directions. They might take offence if, accepting their words literally, we were to represent them as condemning the industrious, the intelligent, the skilful, the economical, the sober, and the trustworthy—the actual money-earners. Neither would they pardon what they might call our impertinence, if, assuming that they meant nothing so absurd, and wishing to give them credit for some meaning, we were to ask whether they objected to see wealth earned through the medium of money, and whether they were prepared with some substitute more conducive to comfort and morality; or in what form, rejecting money, they proposed to pay the wages of labourers, the fees of lawyers, professors, and physicians, the salaries of judges and other officials, and the incomes of bishops.

P. Might not the moralists whom you are criticizing thus searchingly turn round upon you, and demand, somewhat indignantly, whether you dared to justify all those greedy, rapacious proceedings which are of daily occurrence, verging upon dishonesty, indifference to the claims of others, and a disregard of all charitable considerations? "Are you not aware," they might add, "that in all ages the love of money has been characterized as the root of evil, the incentive to crime, and the tool of corruption?"

B. Thanks to what we have learned from you, we hope we

should have no difficulty in separating from this chaos of words the few particles of truth and sense that lurk concealed in it. You have taught us how to observe and collect together the qualities essential to wealth-getting, and yet not to lose sight of those other qualities which must accompany them in order to make up the truly good man. Indeed, it might be safely affirmed, that the second must be preceded, if they will not be produced, by the first. Wealth, or money, the representative of wealth, as we see every day, may be sought for in various ways, some good and some bad; and we will not allow ourselves to be entrapped into an undiscriminating condemnation or approval of both together. On one position we may fall back in perfect security at all times. Wealth must be earned. Virtue or good conduct, totally divested of wealth, is impossible. Wealth, or money as a medium for obtaining it, must form part of every effort to promote well-being. Charity, kindliness, munificence, parental care, unsupported by wealth, cease to be realities. Hence, to affix an ugly epithet to the wealth-earning qualities is to discourage the acts of beneficence which we ought to be proud of in others, and ambitious of being performers in ourselves. Descending from general to particular terms, it is to urge us to feed the hungry without bread, to cover the naked without clothing, to shelter the homeless without houses, to cure the sick without medicine, and to teach the ignorant without schools. We thank our teachers, and you among them, that our understandings and dispositions have not been so trifled with as to unfit us for drawing distinctions between the various ways of seeking and using wealth or money; and we trust that through your assistance we shall be successful in making money, in earning wealth, and in performing our duties with its aid, so as to bring no discredit upon those who have cared for us.

P. Perseverance in this method of dealing with distortions of doctrine will qualify you to steer your course in safety amid many similar abuses of language. There are men,

occupying, too, the proud position of teachers, who deal out their praise and censure with so little discrimination as to make the first worthless and the second harmless. Powerful means of encouraging the good and restraining the bad are thus lost to mankind. How common it is to hear men of this stamp indulging in fulsome flattery and extravagant vituperation, instead of carefully and conscientiously certifying to themselves who are the good and who are the bad—which is good, and which is bad conduct—and then measuring their praise and blame accordingly! But denunciation is their *forte*. By turns each nation, each sect, each trade, each profession, master and servant, rich and poor, and, finally, all mankind, are made the theme of fierce invective, becoming, fortunately, day by day less mischievous, generally absurd as it is, and obviously false where intelligible, through the spread of such excellent intellectual and moral discipline as you are profiting by.

ON PRICE.

P. We have been examining with some minuteness the contrivances and arrangements for facilitating interchange, and for promoting the distribution of the various commodities produced, so as to suit the taste and convenience of all who had acquired a right to the enjoyment of them. A detailed and familiar knowledge of these contrivances, and of the principles on which they ought to be regulated, is essential to enable people to turn them to the best account, and to preserve themselves from being led into mistaken applications by the false appearances which may arise out of them. Every student, however, ought to rise up from the study of these details, feeling that he has not lost his grasp of the great pervading principles which override all minor arrangements, and the steady contemplation of which will always enable him to recover from any aberrations into which he might have been betrayed while occupied within the narrow limits of subordinate topics. Whatever discussion and controversy may grow out of the fluctuations of wages, profits, and prices—whatever dissatisfaction may be felt at the relative shares of wealth enjoyed by labourers and capitalists, or by some labourers and capitalists as compared with others—it is not to be questioned that a store of wealth proportioned to the number of people to be maintained out of it is indispensable to the general well-being; that if this store be unequal to afford comfortable subsistence to all, there can be no escape from suffering, softened though it may be by resignation and by a consciousness of the efforts in progress for limiting the continuance of this suffering; and that a store larger in pro-

portion to the numbers of the people is only to be arrived at, after a time, through more intelligence, more industry, more economy, more sobriety, and more integrity. Deep convictions on these points should be formed, and being formed must be carried through all the details and ramifications developed by successive industrial improvements, before any diminution of suffering, any amendment of condition, can be reasonably expected. We have noted how wealth has come to be classified under two great heads to assist our inquiry into the causes which have led to its distribution as we observe it, and into the causes which might lead to the better distribution that is desirable. These two heads are—"Wealth held specially for consumption and enjoyment," and "Wealth held as a means of producing more wealth for deferred or future consumption and enjoyment." To the latter of these the name "Capital" has been assigned. Looking at the two sets of holders of this wealth, or, where the same persons are holders of both classes of wealth, at the characteristics of the wealth which they hold in each capacity; can you point out any distinction between these two classes of wealth, which, for facility of reference, I will call capital and non-capital?

B. The capital is held in much larger masses than the non-capital. The arrangements of partnerships, and of borrowing and lending, are brought to assist in collecting capital into masses, as being thereby better adapted to earn profit.

P. Do you not observe distinctions in the quality as well as in the quantity of the wealth?

B. Capital consists very largely of instruments of production, of raw material, and of commodities not in a state adapted to be used for purposes of enjoyment. Non-capital consists entirely of commodities usable for comfort and enjoyment.

P. Are there no other distinctions?

B. The masses of commodities, even of those prepared for enjoyable consumption, held as capital are made up of a small number of kinds; whereas the comparatively small

quantities of commodities held by each individual as non-capital are made up of a very large number of different kinds, as is well known to everybody at all acquainted with the arrangements of any family in comfortable circumstances.

P. What is going on with the family stores?

B. They are being regularly consumed, and also regularly replaced.

P. How is money used in this latter operation?

B. In making repeated purchases from capitalists and capital-administrators.

P. And how is the money replaced which is parted with to make these purchases?

B. From receipts, we may presume, as income from wages, profit, or annuities, according to the position of the several buyers.

P. While the consumers are thus each, as it were, drawing out in driblets from capital—not from their own, but from other people's capital, but nevertheless from capital—what are the administrators of capital about?

B. Some, as shopkeepers, are busy with the money which they have received from their customers in buying from merchants and wholesale dealers, to replace what has been parted with, or whatever else in its place they think is more likely to be asked for. Some, as merchants and wholesale dealers, are acting like the shopkeepers, only on a larger scale, and extending their purchases over all parts of the earth. Some, as carriers to the merchants, are attending to all the minuter operations necessary for safety, punctuality, and celerity of transport. Some, as manufacturers, are engaged in procuring and working up more raw material to replace the finished fabrics which they had delivered from their factories to the merchants and dealers. And others, as farmers, will be steadily pursuing their operations, which, continued throughout the year, end with those periodical crops, whence they hope to replace in the lump what they have been disposing of week by week or month by month. Besides these are the

administrators of capital, whose vocation it is to draw up from the mines the various minerals which serve as the raw material for many of our most useful implements and articles of domestic furniture, and of instruments of production, not omitting the coal, which acts in the double capacity of an article ready prepared for household use, and of a raw material, by consuming which is generated that mighty steam which assists so largely in all our wealth-producing and comfort-creating operations: all of these finding it an important part of their allotted work to engage labourers and pay them wages.

P. Are there any signs by which society would be apprised or warned if expenditure and consumption were going on too rapidly for future safety?

B. None that we know of, except what each individual might be conscious of—that his expenditure was encroaching upon his means of providing for future wants and for the efficient performance of future duties. Undue consumption at one time will be followed by subsequent short allowance. But this would rather be suffering after an event, than a warning of its approach. Undue consumption can only mean inroad into capital, and inroad into capital carries along with it diminution of wages, and hence compulsory diminution of consumption as a consequence of former excessive consumption.

P. If there be no signs to warn, are there no securities to protect society against excessive consumption?

B. The securities which protect are to be found in the sum total of the precautions taken by each member for the protection of himself and of those dependent upon him. The larger portion of society take these precautions. Too many omit them. Hence the chequered state of society, which, however, improves, though slowly, owing to the growth of those qualities which in reality are the fountain-head of the precautions and the security.

P. Would not excessive consumption be the cause of a rise of prices? and would not that be a warning sign?

B. If the excessive consumption were spread over all commodities, we cannot understand how prices could be affected. A rise in the prices of all commodities means a fall in the value of gold. But this would be accompanied by an export of gold in place of the commodities usually exported; and commodities usually imported would be imported in larger quantities. The tendency of gold to go out, of commodities usually exported to be retained at home, and of commodities usually imported to be imported in larger quantities, would keep down prices; but as some of the money would have been parted with, money-wages would fall, and thus the rate of excess in consumption would first be checked by diminished supplies, and eventually be succeeded by decided short allowance, the severity of which would be in proportion to the extent and continuance of the previous excessive consumption.

P. But when excessive consumption takes place, is it generally spread over all commodities indiscriminately?

B. We are inclined to say that it is not. We think, however, that a distinction ought to be drawn between the ordinary and extraordinary cases of excessive consumption.

P. I shall gladly listen to any distinction which you will draw. What do you mean by ordinary excess of consumption?

B. That waste and inattention to economy which generally prevail, to which society may be said to have accommodated itself, however reluctantly. The destitution and suffering that follow from it, and the contributions for relief that are levied upon the economical, are the only consequences that we can trace to this, which we call the ordinary excess of consumption. Less waste and more attention to economy would abate this destitution and suffering. Why or how they should affect prices we cannot discern.

P. What do you mean by extraordinary excess of consumption?

B. That which, in addition to the foregoing, arises out of a misapprehension of the quantity of commodities forth-

coming for consumption. The stocks of one or more commodities might be less than they were thought to be; and if the rate of consumption were based upon the larger but erroneous estimate of the stock, it would be in more than ordinary excess. The yield of a crop of corn or of potatoes, or the supplies coming forward to replace the cotton, sugar, tea, &c. &c., taken day by day into consumption, may be short of what was counted upon; in which case the consumption would be more than ordinarily in excess.

P. When and how would this excessive consumption of a limited number of commodities affect prices?

B. It would only affect them when the inadequacy of the stock to admit of a continuance of the same rate of consumption was discovered. The sooner it was discovered, the sooner and smaller would be the rise of price. The longer people continued unaware of the deficiency of stock, the later, but also the greater, would be the rise of price.

P. You have heard, no doubt, of periods of great distress from the closing of works, from bankrupt employers, from want of employment, which really are symptoms of industrial disturbance, indicating that the capital is unequal to carry on all the work undertaken, and to continue the same wages to all the workmen who had been engaged. The causes of so deplorable a state of things can only be fully explained after the consequences of the use and misuse of credit have been investigated. This we must defer awhile. However brought about, the evil itself is palpable. More wages had been paid, whether in one or more or in all businesses, at one time, than the capital was adequate to continue, assuming that the wages thus paid in excess were consumed. Had the extraordinary part of these wages been saved the evil would have been averted, the labourers having taken advantage of the occurrence to grow more rapidly into capitalists. Taking note of this cause of excessive consumption, which we reserve for examination at a later period, let us try to form a just estimate of the precautions interposed by our industrial arrangements

against what you call extraordinary excess of consumption—against excessive consumption, not of commodities in general, but of particular commodities, sometimes of one kind and sometimes of another. Are there any precautions? and if there be, what are they? and do they appear sufficient to protect us against excess of consumption, and the suffering that would be consequent upon it, especially if long protracted?

B. The various members of society, in their capacity of consumers, apply money in hand, or with promises accepted as equivalents of money, to the dealers, principally retailers, whose line of business it is to supply the particular commodities sought for. The essential part of the business of these retailers is to buy such commodities as their customers are likely to require, and then to sell them at prices which, after paying all expenses, will leave a surplus or profit to themselves. If this surplus be greater than the surplus earned by other traders with equal capitals and similar qualifications, other capitalists will be attracted to the business, till the difference between the buying and selling prices would be so reduced as to leave no more than a margin for what goes by the name of ordinary profit. If, on the other hand, by some miscalculation or unexpected vicissitude this surplus were so small as not to leave a margin for ordinary profit, the abandonment of that business by one or more of those engaged in it, would afford scope for an increase of the difference between buying and selling prices sufficient to yield an ordinary rate of profit.

P. To save repetition, we will understand that, on an average of years, the tendency towards a rate of profit commensurate with the capitals and attainments embarked establishes a difference between the buying and selling prices of all commodities, not greatly to be departed from for any length of time. Taking this for granted, you may continue your explanation.

B. The usual customers proceed to a shop—say of a grocer—to make their usual purchases of sugar, under ordinary

circumstances, and the grocer, on his side, buys from the merchant, so as to replace, from time to time, what he has sold. If we introduce a change of circumstances, say that advices have been received of great damage to the growing crops, and of the almost certain prospect of a considerable falling off in future supplies; when the customers proceed to the grocer's shop, supposing him to be alive to the intelligence just received, they will find the price put up, if only because the grocer knows that he will have to pay a higher price for the next supply which he seeks from the importing merchant. If the grocer be not well up in the latest news affecting his own trade, he will miss the opportunity of securing an extra profit, and his selling prices will be raised after he has paid higher prices, instead of beforehand.

P. How will this rise of price act upon the stock of sugar destined to secure an uninterrupted supply ?

B. When the customers come to market, they will be compelled to forego a portion of their usual consumption of sugar, or of something else in its place, or to draw away from those savings which they would otherwise have added to their capitals. Some will probably act in each of these ways ; but most in the first. Hence a smaller supply of sugar, the knowledge of the approaching deficiency having been acted upon by reducing the consumption without a moment's delay, will be eked out at less inconvenience than would otherwise be felt.

P. If the coming deficiency were not anticipated, or if it came suddenly upon us, would the action of prices be an adequate safeguard against severe privation ?

B. It is difficult to say how there can be any adequate safeguard after a cause has already produced its effect. When the governor of a blockaded town lays hold of all the provisions within it, and deals them out in small quantities every day to each individual, he does not prevent, he only does all that his position admits of to limit the evil. The action of price does the same thing in the extraordinary circumstances

supposed. If a large stack of warehouses containing the half of our whole supply of sugar were to be burnt down, the effect upon price would cause it to act instantaneously in checking the rate of consumption.

P. Would the rise of price do anything to diminish the loss of the proprietors of the sugar that had been destroyed by fire?

B. Not unless they were proprietors of other sugar. Insurance is the remedy for those who are exposed to loss from fire. Protection to communities against deficiency from bad seasons is to be sought in the extraordinary yield of good seasons. Compensation to the cultivators is obtained partly from the yield of good seasons, but principally from the enhanced price of the smaller quantity at their disposal.

P. If the burnt stack of warehouses were in London, or Liverpool, or Bristol, would the want of sugar fall with all its severity upon that spot?

B. No; its intensity would be diminished by being shared far and wide. The price of sugar in the district of the disaster would rise; but that rise would be limited, first, by the knowledge that the inhabitants of other districts would forego a part of their ordinary consumption, and secondly, by the actual coming of some of the sugar thus unconsumed.

P. Would this be the case?

B. It could scarcely be otherwise, for the business of merchants is to buy, transport, and sell; and so long as they can calculate that the price at which they may reasonably expect to sell will cover the price at which they buy and the expenses at which they transport (including the ordinary profit looked for by merchants), the work necessary for transferring merchandize from the places where it is comparatively abundant to the places where it is comparatively scarce will be sure to be engaged in.

P. Have you not rather assumed than proved that the inhabitants of other districts would limit their consumption,

and thus contribute to supply the deficiency created in the district of the fire ?

B. We thought it might be taken for granted that they could not withstand the action of prices upon them. It is admitted that a rise of price in the district of the fire would be instantaneous; and we may consider this district under two aspects—as a centre of supply for other districts, or as dependent for its supply upon other districts. In the first case, the rise of price would check the usual export, and thus diminish the supply, raise the price, and check the consumption in other districts. In the second case, the rise of price would attract increased supplies from other districts, and thus raise prices and diminish consumption in them.

P. Are we entirely dependent upon the intelligence and industry of producers, the economy of consumers, and vigilance, sagacity, and enterprise of traders, to maintain our stores of wealth; and in the case of particular commodities which, owing to the vicissitudes of seasons, and to unlooked-for accidents, cannot be preserved in uniform quantities, must we rely upon the same qualities in the same classes for protection against severe privation by timely diminution of consumption, and by drawing from the comparatively abundant stores of some parts of the world to supply in part the deficiencies of others ?

B. Entirely. And as we have agreed that without a prevalence of the good industrial qualities well-being is impossible, so with their prevalence we may feel that our dependence upon them ought not to be spoken of as though it were a state from which we would escape if we could—as inevitable—as a state to be resigned to, although unsatisfactory—but as a state to be rejoiced at and to repose in.

P. The action of prices, as you describe it, is of sufficient importance to make me desirous of questioning you a little further upon it. How would a rise of prices of particular commodities act upon the growers of those commodities ?

B. It gives them at once increase of profit or diminishes

the loss to which they might otherwise be subjected. It inspires efforts for further production of those commodities, or causes the intention of diminishing or relinquishing their production to be abandoned. It leads growers, besides, to consider to what extent the maintenance of the rise of price may be counted upon in the face of the increased produce which it may call forth. According as they decide, their future efforts are directed, whether to produce the same or a larger quantity of the commodities, the prices of which have risen.

P. How would a rise of prices of particular commodities act upon the manufacturers of those commodities ?

B. It gives them at once an increase of profit, or diminishes the loss which they would otherwise have sustained. It also sets them considering whether an increased price is likely to be maintained, and to what extent; whether it will warrant their giving the enhanced price for the raw material likely to follow upon their proceeding to buy more. The extension of their manufacture will be determined by their judgment upon the causes of the rise of prices, and upon the probable length of the time during which these causes will continue in force.

P. How would a rise of prices of particular commodities act upon the merchants and traders who deal in those commodities ?

B. It gives them immediately an extra profit, or diminishes their loss upon the stocks in their possession. In other respects it acts more promptly upon all their transactions with the nearer and more accessible markets. The telegraph wires are put in requisition, and thus, through the activity of merchants, amid the incessant movement of prices, there is a constant tendency to uniformity throughout the world, *plus* or *minus* the charges of transport. Participation in the superabundance that may alight for a time on any particular spot is thus generally diffused, and the suffering in any particular spot visited by exceptional scarcity is relieved by the inducements presented to all others to make contributions towards its relief.

P. The action of a fall of prices would, of course, be the opposite to that of a rise. Have you not something to say about the causes of high and low prices, as well as the effects ?

B. Not in answer to your questions concerning the action of prices, which we supposed meant us to apply our thoughts to prices as causes.

P. Your correction is most judicious. I will frame a question which shall entitle me to the information I am in search of. You have shown how fluctuations of prices influence industrial conduct. Can you show how the fluctuations of prices are brought about ?

B. A falling off in the supply of any particular commodity, actual or anticipated, and an increase of demand, actual or anticipated, are the causes of a rise in its price; and an increase in the supply of any particular commodity, actual or anticipated, and a falling off of demand, actual or anticipated, are causes of a fall in its price.

P. Prices enter so largely, not only into all speculations connected with industrial operations, but also into the every-day transactions of domestic life, that we cannot be too minute in our inquiries, or too cautious in the conclusions to which we surrender our judgment, and on which, whether for good or for evil, we shall have to act. There is scarcely a day of our lives that we may not hear all kinds of epithets, besides "high" and "low," applied to prices—such as good and bad, moderate and extravagant, favourable and unfavourable, and others besides. Cautions or corrections, or exercises for thought, may be got out of the examination of the meaning of these epithets. What should you think was likely to be meant by good and bad prices ?

B. A seller will consider a high price good, while the buyer who finds himself obliged to submit to it will consider it bad. On the other hand, a low price will be called bad by the seller, and good by the buyer.

P. You are cultivating a different frame of mind to

direct you in your efforts to apply the epithets "good" and "bad." You would require to know something more than how much money you could obtain for your commodities, or what quantity of commodities your money would procure for you ?

B. We should, of course, wish to ascertain which, of all prices, were most likely to conduce to the general welfare. It is obvious that some other test is required than the satisfaction of buyers and sellers, seeing that what is pleasing to the one is displeasing to the other.

P. What will you say to the terms "moderate" and "extravagant," as applied to prices ?

B. We expect that the meanings attached to those terms would be that the prices were below or above the average. The latter, being a strong expression, might also be supposed to indicate an opinion that the prices in question were unwarranted by actual deficiency of supply, or by any probable deficiency that would not be more than compensated by a much less straitened consumption.

P. Most people, I take it, will prefer some prices to others, and will do so under the impression that some prices are better than others. You, I dare say, have such a preference, or are you indifferent whether prices be low or high ?

B. We certainly prefer the low.

P. And what is this preference founded upon ?

B. Upon the belief that a period of low prices, particularly of the chief necessaries of life, is a period of comparative well-being. Cheapness and dearness, terms in common use, are almost synonymous with the comfort and discomfort of large masses of people. And "cheap," as we have already seen, means getting much, while "dear" means getting little for your money.

P. You have placed this question on an excellent footing for examination. In order to come to a decision on which we may rest with satisfaction, let us have before us a period of two years, the like of which have been frequently recorded.

We will begin with an abundant harvest, following upon a previous state of abundance. What, in such circumstances, would be the prevailing price of corn and bread?

B. Low.

P. How long would those low prices continue?

B. Supposing no over-estimate had been made of the largeness of previous stocks, and of the probable yield of the last harvest, nor any under-estimate of the increased consumption occasioned by the low prices, they would continue till altered conditions or circumstances occurred to disturb them.

P. Could any circumstances occur before another harvest?

B. Yes. Before the actual harvest, there are generally some signs, more or less to be relied upon, of what it is likely to be.

P. Is it a favourable circumstance, when people notice these signs, and are able to interpret them correctly?

B. Of that, surely, there can be no doubt.

P. Would it be still more favourable if these signs were noticed early?

B. They could scarcely be noticed too soon.

P. Let us, then, suppose the signs of an unpropitious season to force themselves upon public attention from the very beginning, and to continue to the end of the next harvest—a bad seedtime, a late and cold spring, a wet summer, thin crops, and lastly, bad weather to get them in. What would happen?

B. Prices would rise early and gradually, but more and more rapidly as each new threatening symptom followed upon its predecessors, till at last, when the full effect of all was patent in a bad harvest, the low prices which had prevailed at the close of the preceding harvest would be replaced by high prices.

P. What would be the effect of this steady advance of prices after the good harvest, in anticipation of the approaching bad harvest?

B. It would, in the first instance, put a stop to the extra

consumption rejoiced in, and then, step by step and with increasing rapidity, summon bread-eaters to limit their consumption, and to resort to other descriptions of food, if there were any, upon which the weather threatened to act less fatally. It would also raise prices in all other parts of the earth where the prospects of harvest were good, and in the nearer parts first, and more nearly to a level with our own, by drawing away from them a portion of that comparative superabundance which they were ready to part with in exchange for other commodities more to their minds.

P. After the bad harvest, and when the range of high prices is fully established—when more than ordinarily poignant complaints from the poorer classes reach the ear—when lectures are read to millers, and bakers, and dealers in corn, by the less instructed and less conscientious portion of the press, upon the unwarrantable prices which they are asking—what would your judgment be upon prevailing prices—that they ought to be lower?

B. We could not form such a judgment, unless we had evidence to satisfy us that the larger portion of the farmers, merchants, and dealers engaged in the corn and flour trade were mistaken in their calculations and anticipations. And as they, in general, will be possessed of more information than others on matters connected with their own business, and their success is indissolubly bound up in the correctness of their estimates of the supplies likely to be forthcoming to meet future demands, the prices resulting from their notions of supply are more likely to be adapted to regulate consumption so as to satisfy present wants with due regard for the future than any prices that we could name.

P. As you cannot say that high prices after a bad harvest ought to be lower, and give reasons, besides, for supposing that they ought not to be lower, may I ask if you can speak with more confidence of the prices progressively rising before the apprehended badness of the harvest had been verified by the result?

B. Upon these prices we may decide with confidence that they ought not to have been lower.

P. What is it that makes you so confident?

B. The still higher price after the real character of the bad harvest had been ascertained cannot but make everybody reflect upon and shudder at the inordinate prices which must have prevailed if the previous rising prices had not given timely warning to check consumption and to collect additional supplies from other quarters.

P. If I understand you correctly, it is your opinion that the high prices prevailing after a bad harvest ought not to be lower; and you have reason for knowing that the high prices in anticipation of the approaching bad harvest ought not to have been lower. And how do you form your judgments of what ought and ought not to be?

B. By ascertaining what is and what is not conducive to the general well-being.

P. Reverting to a former question, did you not tell me that you preferred low to high prices, and now do you not say that there are circumstances in which you prefer high prices—in which prospects would be sad indeed if prices were not high?

B. We have been unguarded and undiscriminating. We ought not to have expressed a preference for low prices, detached from the circumstances in which they might occur.

P. What are the prices, then, that you ought to prefer?

B. Prices based upon an intelligent estimate of actual supply and demand, and of probable future supply and demand.

P. Applying this answer to such commodities as are included under the name corn, are the previsions of producers and dealers, even the most circumspect and intelligent, sure to be correct in every instance?

B. That cannot be. The party who, in anticipation of a bad harvest, holds corn in granary, or orders a cargo from some distant land, must always appear to have been mistaken after the advent of a good harvest.

P. How should you decide whether an estimate ought to be considered intelligent, or the conduct based upon it judicious?

B. Not by the event in any one instance. We could only decide satisfactorily after examining the results of many estimates. We should endeavour to ascertain whether the magnitude of the excess of price, where the anticipations are verified, suffices to pay all losses from the instances in which favourable harvests bring with them falling prices. We should decide according as we learned that a profit was gained, on an average of years, by holding corn for sale at some more or less deferred period, in anticipation of probable future enhanced prices.

P. When you said that you preferred low to high prices, or cheapness to dearness, what had you in your thoughts that you really do prefer?

B. Abundance to scarcity. We omitted to bear in mind that fluctuations in prices are but indications of the efforts that are being made to secure to mankind, as nearly as possible, a uniform supply to satisfy their uniform wants out of sources of supply at one time much above, and at others much below, the uniform supply required.

P. Should we, in conformity with these notions, have abundance if, taking favourable and unfavourable seasons together, the uniform or average supply was sufficient for the wants of all?

B. We should consider that to be abundance, accompanied nevertheless by fluctuations of prices, indicating when more, and when fewer, precautions and exertions were needed to secure the continuance of that abundance in regard to particular commodities.

P. Prices, then, and all the terms connected with them, including cheapness and dearness, can have little to do with that larger inquiry into the conditions which determine general well-being. Are you not a little startled at this inference

from your answers, an inference from which, nevertheless, there appears to be no escape?

B. Prices grow entirely out of division of labour and interchange, and the use of money—all developments of intelligence applied to industry, and therefore taken into account, when we say that the abundance essential to well-being is only to be expected through the prevalence of good industrial qualities and through the efforts in behalf of the young, without which those industrial qualities will not be forthcoming.

P. In what way do fluctuations of prices affect wages?

B. By giving labourers a larger or smaller quantity of particular commodities in proportion to their money-wages.

P. Are fluctuations of prices, then, always accompanied by fluctuations of wages?

B. We do not see how one can occur without the other. A bad crop of corn and a good crop of sugar occurring at the same time, and occasioning a higher price of corn and a lower price of sugar, would place at the disposal of the labourers a smaller quantity of corn than before, and a larger quantity of sugar, with an unaltered amount of money-wages.

P. But do not money-wages fluctuate as well as prices?

B. It would not do for us, with our limited knowledge, to say that money wages do not fluctuate. They vary, as we know, with the improving or declining capabilities of the labourers; nevertheless, we should not say that wages fluctuated because they varied with the estimates formed from time to time of the producing powers of labourers.

P. Are these alterations in real wages, or alterations of wages which occur through alterations of prices, the only alterations which ought to be looked upon as fluctuations?

B. The two kinds of alterations, those from varying estimates of producing capacity and those from fluctuations of prices, frequently occur at the same time, acting sometimes in the same, sometimes in an opposite direction, and we could

not hope to be expert enough to distinguish them on all occasions. We are rather encouraged, however, to confide in the correctness of our opinion that money-wages change only, while real wages fluctuate with the fluctuations of price, by its coincidence with the two great truths previously established; that average wages are the quotient of the wages-fund divided by the number of labourers; and that the effort of the capitalists who distribute the wages-fund, being to obtain the largest profit in proportion to the capital employed, tends to bring about rates of wages for all classes of labourers proportioned to the estimates formed of their producing powers.

P. This coincidence may be very plain to you, but it appears to me that you have rather assumed and asserted than proved its existence.

B. We will try to explain to your satisfaction what does certainly seem quite clear to us. Granting an unaltered state of producing powers among labourers, the money wages that had been adapted to their several producing powers would remain unaltered. But if, with the incessant consumption of capital in the business of production, the various constituents of that capital were sometimes not replaced, at others vastly more than replaced, wages, as measured in those commodities, would fluctuate, leaving money-wages unaltered, and hence the proportions of the wages-fund allotted to the several classes of labourers unaltered also.

P. As, however, the producing powers of labourers are frequently undergoing change, there must be two kinds of changes in wages, one of which you call fluctuation, but not the other.

B. Those changes which we do not consider to be fluctuations are the changes in money-wages by which wages are adapted to the varying estimates of powers of production in labourers. The changes which we consider to be fluctuations are the changes in real wages wrought through the fluctuations of prices.

P. Tracing the career of a well-conducted labourer from the outset, might we expect that, from small beginnings, his wages would gradually rise to a culminating point, afterwards to sink down towards the level whence they started, chequered throughout their course by fluctuations?

B. That is what we mean, the alternate rise and fall being marked in the money-wages, and the intermediate fluctuations being marked by the fluctuations of prices.

P. If there were no such calamities as bankruptcies and suspensions of work, your description might correspond with what we observe. But do not these furnish us with examples of fluctuations of money-wages as well as of real wages?

B. We had not thought of these.

P. And now, having your attention called to what you had overlooked, are you prepared to reconcile them with your explanation or to abandon it?

B. You do not expect us to do either at present. We may have something to learn which will enable us to account for passing events, correcting or modifying conclusions so far formed, rather than abandoning them. We see at once that a new element with which we are not acquainted is introduced, and we must pause and hold our judgments in suspense till we have studied it sufficiently to assign its proper weight to it.

P. The use of money, which you have examined, presents to us new phenomena. These you have studied and interpreted. The use of credit, which you have not yet examined, presents other phenomena. These you will have to study and interpret. The phenomena introduced to us by the adoption of money have proved to be perfectly reconcilable with our previous conclusions, and so may the phenomena introduced to us by the adoption of credit. Meanwhile you take note of a difficulty, for the solution of which you cannot be prepared, till you have investigated the consequences of using credit, as well as money, in the business of production and interchange. But you can tell me now whether you are aware of any rules

of conduct which ought to be added to those already recognized, as growing out of the alterations and fluctuations of wages viewed through the medium of money and prices?

B. We see no call for rules of conduct in addition to those already noted. The modes of observing those rules may appear in another form. Economy has to contrive the means of uninterrupted well-being out of wages at one time more than sufficient, at another less than sufficient, on account of declining powers of production. It has also to accomplish, as nearly as possible, uniformity in the supply of wealth available for consumption and enjoyment, *i. e.* to meet uniform wants, in the midst of fluctuating prices.

P. Can you illustrate this view of the two duties of economy by an example?

B. We might take the average wages of an artizan, running over his industrial life, at 30*s.* a-week, and assume that he lays by 10*s.* a-week to provide against the contingencies of illness and old age. During his life the price of the loaf fluctuates between 4*d.* and 12*d.* If, while saving 10*s.* a-week he also wish to eat nearly as much bread when it is dear as when it is cheap, he must make extra money saving during the season of cheap bread, so as to be able to spend more money upon bread during the season of dear bread.

P. You have said that prices throughout the world have a tendency to settle themselves so as to be the same everywhere, *plus* or *minus* the charges of transport, according as the commodities were imported or exported. Might it not happen that the prices of all commodities should be higher in one country than in others?

B. Such a state of prices is just possible—is conceivable at all events—but it can only occur in a country which produces nothing except the metal out of which money is coined. A country so circumstanced would export money and import all commodities.

P. Do you feel quite sure that prices universally higher than those in other countries could prevail in no other circum-

stances? If, for the purpose of investigation, I were to affirm that such a state of prices might occur, what would you say?

B. We might call upon you to explain how what you affirm could be possible.

P. And you would be justified in doing so. It may happen, however, that persons who make assertions which they cannot explain will acknowledge their inability and plead their want of expertness. They neither wilfully mis-state, nor object to retract or correct a mis-statement when once brought to perceive it. Could you do nothing in order to come to an understanding, when you know that those with whom you disagree are mistaken?

B. We would gladly show where they were wrong, but in the case before us we fear we should be obliged to repeat that we cannot conceive the possibility of a state of prices such as supposed by you.

P. You ought to aim at doing more. You ought to be able to expose the absurdity of my supposition. The ability to follow out an assumption into consequences which confirm or confute it is so useful that you ought not to miss the opportunity of obtaining some practice in it. Let us suppose, then, that such a state of things were to occur as that all prices, the prices of commodities that we habitually export as well as of those that we habitually import, were to be higher than the prices in any other country; what would happen?

B. We should cease to export, but continue to import, perhaps more largely than before.

P. How should we pay for the imported commodities, exports having ceased?

B. With money, or with the metal out of which money is coined.

P. What would be the consequence of importing more than before, ceasing to export, and parting with our gold?

B. To raise the value of gold, or bring down the prices of commodities.

P. And what would be consequences in other countries of

our taking more than usual of the commodities which they habitually exported, and of withholding from them the commodities which they habitually imported, paying them with gold instead?

B. To lower the value of gold, or raise the prices of commodities.

P. How long would such a state of commercial intercourse continue?

B. Till prices fell sufficiently here and rose sufficiently elsewhere to contract importations to their ordinary dimensions, to lead to the resumption of exports and to the discontinuance of paying for what we imported with gold.

P. What number of days would be likely to elapse before prices were brought out of a state which, in reality, must prevent all trade except an exchange of gold for commodities?

B. A very small number indeed, when the country parting with its gold has no gold-fields of its own.

P. In a country like ours, which habitually imports corn, cotton, wool, flax, hemp, silk, and hides, as well as sugar, coffee, and tea, and habitually exports calico, yarn, woollens, linen, leather, earthenware, cutlery, glass, machinery, and coals, and through which gold is always passing, after retaining what is wanted for our own use, does it appear to you that there is anything likely to prevent the occurrence of such a state of prices as the one supposed?

B. We have said that the work of supplying all the wants of the community is distributed among a large number of individuals, each of whom confines his attention to a few commodities, the prices of which he watches from day to day, and the future prices of which he strives to anticipate; and it is hardly possible, with all this lively interest taken in them, that it would not be seen beforehand that prices were about to rise, making it advisable to check exports, increase imports, and part with gold.

P. You must, I am sure, feel yourselves all the better prepared for self-guidance by being able to deal with absurd

suppositions in this way. You will meet with people enough in the world inclined to pass them off upon you. You will be saved from vain disputations and assisted to enlighten and convince without giving offence—may-be, to correct misconceptions of your own, if with your knowledge you combine the skill to induce those with whom you differ to accompany you into an examination of the consequences that must inevitably follow from their own statements if accepted. Among others, whom you will meet, will be persons disposed to indulge in censure of the practice of watching and prognosticating prices, with the intention of earning profit by buying and producing at as small a cost, and selling at as high a price, as possible. Have you learned enough to be prepared to express an opinion upon the correctness of their views and upon the good likely to be produced by their teachings?

B. We would not hesitate to pronounce their censure misapplied, and to bear witness in favour of the objects of it as being men engaged in good works, understanding, of course, that they were observing all those rules of conduct which we have characterized as good.

P. May we, then, class the men thus successfully engaged in industrial work among good men?

B. So far good that we know of no reason for excluding them from that class. But before we could admit them, we should wish to know how they applied their wealth as well as how they got it, and much besides.

P. You would, I suppose, have no hesitation, as regards men employed in buying dear and producing at a great cost and selling cheap, in classing them among bad men?

B. They would certainly be taking great pains to damage society through their own ruin. People are not to be found who act in this way systematically and designedly. We doubt their existence. They would not be suffered at large. If there be such, we should be tempted to class them among fools and imbeciles rather than among bad men.

P. Does not the practice of buying in the cheapest and

selling in the dearest market leave the poor, the destitute, those who have nothing to offer in exchange, totally unprovided for?

B. It does; and so also would the opposite practice. The duty of caring for the incapable and destitute must devolve, if it is not to be neglected, upon the possessors of wealth; and the practice of producing and buying cheap in order to sell dear increases the wealth out of which the destitute are to be provided, whereas the contrary practice would cause wealth to disappear.

P. After the proofs which you have given me of your ability to appreciate the guidance derivable from fluctuations of prices, and the advantages secured to society by those who, able to interpret them aright, buy labour and commodities where they are to be found cheapest, and dispose of them as profitably as possible, thereby applying labour where it can be made most productive, and distributing commodities where most enjoyment can be derived from their consumption; I need say nothing more to caution you against a class of teachers who are in the habit of aspersing the whole race of successful wealth-producers with contumelious epithets, instead of holding them up as examples to be imitated. A teacher who observed among such men conduct deserving of blame, mixed up with their commendable industrial conduct, ought to be competent to single out and expose the transgressions. To confound good and bad in undiscriminating censure is to slander and degrade, not to improve and elevate mankind.

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